Incitec Pivot - Climate Change 2018

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 4,500 staff worldwide, including almost 2,000 staff in Australia and over 2,200 staff in North America. IPL manufactures a range of fertiliser inputs and products including ammonium phosphates, ammonia, urea, sulphuric acid and superphosphates at five manufacturing sites across eastern Australia and is the only manufacturer of ammonium phosphates and urea in Australia.

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. It operates 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.

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. IPL recognises that building a sustainable future requires the sustainable management of the production of infrastructure, food, clothing, shelter and energy that people need every day. As a manufacturer and supplier of fertilisers, which are used to grow more food and fibre on existing land, and explosives products, which are used for mining, construction and quarrying, we recognise that our role in value creation relates directly to several UN Sustainability Goals, including ‘Responsible Consumption and Production’, ‘Decent Work and Growth’ and the production of food for a growing population (‘Zero Hunger’).

We also recognise the need to balance our economic performance with our environmental and social responsibilities. Those responsibilities include being a good corporate citizen and operating ethically. They include ensuring good governance in our day-to-day business activities and behaving with honesty and integrity in our interactions with communities, employees, customers, and the environment.

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	Select the number of past reporting years you will be providing emissions data for
Row 1	October 1 2016	September 30 2017	No	<Not Applicable>
Row 2	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 3	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Row 4	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>

C0.3

(C0.3) Select the countries/regions for which you will be supplying data.

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 consolidation approach to your Scope 1 and Scope 2 greenhouse gas 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

Please select

Bulk inorganic chemicals

Ammonia

Fertilizers

Nitric acid

Other chemicals

Other, please specify (Ammonium nitrate (explosives))

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) of the individual(s) on the board with responsibility for climate-related issues.

Position of individual(s)	Please explain
Board/Executive board	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. During 2017, climate change issues, including those relating to financial risks and opportunities, were managed by three positions which report to the Chief Financial Officer, specifically, the Corporate Sustainability Manager, the Group Vice President, Investor Relations & Corporate Development and the Chief Risk Officer. Each of these positions also reports to the Board either directly, or through committees of the Board, such as the HSEC Committee and the Audit and Risk Management Committee.

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
Sporadic - as important matters arise	Reviewing and guiding major plans of action Overseeing major capital expenditures, acquisitions and divestitures	Climate-related issues are well 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 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,

Frequency with which climate-related issues are a scheduled agenda item	Governance mechanisms into which climate-related issues are integrated	Please explain
		investment decisions regarding long term capital projects take into account 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.
Sporadic - as important matters arise	Setting performance objectives Monitoring implementation and performance of objectives Monitoring and overseeing progress against goals and targets for addressing climate-related issues	Due to the significant proportion of energy cost in our manufacturing processes, energy efficiency/intensity (and therefore greenhouse gas emissions intensity) has been a major focus in our manufacturing operations for many years. KPIs associated with energy intensity are therefore well integrated into our performance metrics at many levels of the organisation. For example, see table on p. 32 of the IPL 2017 Annual Report, which summarises the Strategic Initiatives Condition components for the LTI 2014/17, the LTI 2015/18 and the LTI 2016/19, This includes an energy efficiency KPI which supported the 2017 IPL global greenhouse gas intensity reduction targets set in 2015.
Sporadic - as important matters arise	Reviewing and guiding risk management policies	Climate change related issues are integrated into IPL's risk management processes and reported on in the Principal Risks section of the IPL Annual Reports. During 2017, these included industry structure and competition risks, natural gas supply and price risk, regulatory changes aimed at reducing the impact of, or otherwise addressing, climate change, and the management of the impacts of extreme weather events. Emerging risks, such as climate change, and appropriate treatment strategies are monitored on an ongoing basis and reported on to the Board through the established risk management process.

C1.2

(C1.2) Below board-level, provide the highest-level management 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	As important matters arise
Chief Financial Officer (CFO)	Both assessing and managing climate-related risks and opportunities	As important matters arise
Chief Risks Officer (CRO)	Both assessing and managing climate-related risks and opportunities	As important matters arise
Environment/ Sustainability manager	Managing 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.

IPL's highest governing body, the Board of Directors, is responsible for charting the direction, policies, strategies and financial objectives of the Company. The Board serves the interests of the Company and its shareholders, as well as other stakeholders including employees, creditors, customers and the community, in a manner designed to create and continue to build sustainable value. The Board operates in accordance with the principles set out in its Board Charter, which sets out the Board's own tasks and activities, as well as the matters it has reserved for its own consideration and decision-making. 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. The Managing Director & CEO and her direct reports form the Executive Team.

Management, through the Managing Director & CEO and the Chief Financial Officer (an Executive Team member), is responsible for the overall design, implementation, management and coordination of the Group's risk management and internal control system, including the risks and opportunities related to climate change. During 2017, several finance team members managed climate-related issues most associated with their role. These roles are the Corporate Sustainability Manager, the Group Vice President, Investor Relations & Corporate Development and the Chief Risk Officer (CRO). While each of these positions reports directly or indirectly to the CFO, each also reports to the Board throughout the year, either directly or through committees of the Board .
These roles work together to monitor climate-related issues in the following way:

1. The Corporate Sustainability Manager (CSM) manages the global IPL data base and monitors the energy use, greenhouse gas emissions, water use and discharge of the Company globally (including the management of annual third party carbon and energy audits in Australia and the annual completion of the WBCSD Water Tool) and engages with site managers and energy engineers regarding site based opportunities for reduction target setting, developments in carbon regulation, and opportunities and applications for energy efficiency and carbon reduction grants. The CSM also engages with external and internal research and development teams on new technologies and products being developed for customers. In addition, the CSM engages directly with government departments on the development of carbon regulation in Australia, as well as monitoring developments in international legislation on carbon and international carbon markets.

2. During 2017, the Group Vice President, Investor Relations & Corporate Development engaged with investors and investor groups to monitor investor reporting demands relating to climate change issues. This position also facilitated the integration of climate-related issues into corporate strategy where required.

3. The Chief Risk Officer (CRO) manages risk, including climate-related financial risks and opportunities (see the Principal Risks section of the 2017 IPL Annual Report, which discusses those risks identified as 'Principal Risks'). In 2017 these included gas supply and price risk, compliance, regulatory and legal risk, and physical risks ('weather events and climate change'). The CRO also reviews the WBCSD Water Tool completed each year by the CSM.
4. Each of these positions reports directly or indirectly to the CFO, who is the Executive Team member with responsibility for these issues.

[KD1]Taken from Annual Report, p22 dot point 1.

C1.3

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

C1.3a

(C1.3a) Provide further details on the incentives provided for the management of climate-related issues.

Who is entitled to benefit from these incentives?

Corporate executive team

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

Executive remuneration for members of the Executive Team includes non-financial performance measures relating to Business Excellence, productivity and efficiency/intensity: specifically, the measurement of performance goals against a Project Scorecard for the delivery of the new Louisiana Ammonia Project, which includes the KPI 'plant efficiency'/energy intensity (see page 33 of the Director's Report: Remuneration Report in the IPL 2016 Annual Report at ttp://www.incitecpivot.com.au/~/media/Files/IPL/Sustainability/2016%20Sustainability%20Report/IPL_2016_Annual%20Report.pdf). The targeted efficiency/intensity (32 MMBTu of gas per metric tonne of ammonia) supported IPL's 2015-2017 global greenhouse gas emissions target, which was a reduction of 2% tCO2e per tonne of ammonia produced, and was achieved.

Who is entitled to benefit from these incentives?

Chief Executive Officer (CEO)

Types of incentives

Monetary reward

Activity incentivized

Efficiency target

Comment

Executive remuneration for members of the Executive Team includes non-financial performance measures relating to Business Excellence, productivity and efficiency/intensity: specifically, the measurement of performance goals against a Project Scorecard for the delivery of the new Louisiana Ammonia Project, which includes the KPI 'plant efficiency'/energy intensity (see page 33 of the Director's Report: Remuneration Report in the IPL 2016 Annual Report at ttp://www.incitecpivot.com.au/~/media/Files/IPL/Sustainability/2016%20Sustainability%20Report/IPL_2016_

Annual%20Report.pdf). The targeted efficiency/intensity (32 MMBTu of gas per metric tonne of ammonia) supported IPL's 2015-2017 global greenhouse gas emissions target, which was a reduction of 2% tCO2e per tonne of ammonia produced, and was achieved.

Who is entitled to benefit from these incentives?
Energy manager
Types of incentives
Monetary reward
Activity incentivized
Efficiency target
Comment
95% of the company's emissions related to the use of gas as a feedstock and an energy source. Energy is a significant material cost to the business and energy use is closely managed as part of the corporate financial management. Energy efficiency/intensity targets underpin IPL's greenhouse gas intensity reduction targets.

Who is entitled to benefit from these incentives?
Environment/Sustainability manager
Types of incentives
Monetary reward
Activity incentivized
Efficiency target
Comment
95% of the company's emissions related to the use of gas as a feedstock and an energy source. Energy is a significant material cost to the business and energy use is closely managed as part of the corporate financial management. Energy efficiency/intensity targets underpin IPL's greenhouse gas intensity reduction targets.

Who is entitled to benefit from these incentives?
Facilities manager
Types of incentives
Monetary reward
Activity incentivized
Efficiency target
Comment

95% of the company's emissions related to the use of gas as a feedstock and an energy source. Energy is a significant material cost to the business and energy use is closely managed as part of the corporate financial management. Energy efficiency/intensity targets underpin IPL's greenhouse gas intensity reduction targets.

C2. Risks and opportunities

C2.1

(C2.1) Describe what your organization considers to be short-, medium- and long-term horizons.

	From (years)	To (years)	Comment
Short-term	1	3	Assessed annually and addressed in the 'Principal Risks' section of the IPL Annual Reports. IPL has historically made use of a three-year commodity cycle to define 'short-term'.
Medium-term	3	6	Medium-term risks associated with climate change were initially assessed in 2010 by an executive cross functional committee established for this specific purpose as part of IPL's Sustainability Strategy, which was formed and approved by the Board in that year. IPL has engaged a specialist third party to review the medium-term risks associated with the financial impacts of physical and transitional climate related risks and opportunities. This work will be carried out during 2018 and will include a review of the time frames considered to be 'medium-term' (which has historically been two three-year commodity cycles).
Long-term	6	15	Long-term risks associated with climate change were initially assessed in 2010 by an executive cross functional committee established for this specific purpose as part of IPL's Sustainability Strategy, which was formed and approved by the Board in that year. IPL has engaged a specialist third party to review the longer term risks associated with the financial impacts of physical and transitional climate related risks and opportunities. This work will be carried out during 2018 and will include a review of the time frames considered to be 'long-term'.

C2.2

(C2.2) Select the option that best describes how your organization's processes for identifying, assessing, and managing climate-related issues are integrated into your overall risk management.

Integrated into multi-disciplinary company-wide risk identification, assessment, and management processes

C2.2a

(C2.2a) Select the options that best describe your organization's frequency and time horizon for identifying and assessing climate-related risks.

	Frequency of monitoring	How far into the future are risks considered?	Comment
Row 1	Annually	1 to 3 years	IPL's main manufacturing process currently relies on sustainable access to natural gas and water, and is GHG emissions intensive. In addition, our farming and mining customers, and therefore our markets, can be impacted by extreme weather events such as droughts, floods, hurricanes and tropical cyclones, as can our own manufacturing facilities. For these reasons, the risks associated with these physical aspects of climate change, as well as transitional risks such as market impacts, have been integrated into IPL's existing risk management processes and corporate strategy for many years, and risks are reported in our Annual Reports under 'Principal Risks' where they have been identified as such. In 2017 these included gas supply and price risk, compliance, regulatory and legal risk (relating to coal),), weather events and climate change, and compliance, regulatory and legal risk.

C2.2b

(C2.2b) Provide further details on your organization's process(es) for identifying and assessing climate-related risks.

In addition to IPL's comprehensive annual risk management process, the physical and transitional risks and opportunities associated with climate change were initially assessed by 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. Physical risks identified at that time include, but are not limited to, impacts from extreme weather events on our farming and mining customers, our assets and our supply chain (including logistics). Impacts relating to transitional risks identified at that time include, but are not limited to, compliance, regulatory and legal risk, reputational risk, and changing market sentiment impacting on our markets. The opportunities identified are associated with the development of new products, including our enhanced efficiency fertilisers which aim to reduce emissions of N2O (a potent greenhouse gas) and energy efficient explosives technologies which aim to reduce greenhouse gas emissions by using less fossil fuel energy to displace overburden and access ore. These risks and opportunities have been monitored, reviewed and reported on annually in our CDP reports, and the WBCSD Water Tool is completed annually and is reviewed by the Chief Risk Officer.
With the release of the G20 Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) report, IPL recognised the need to review our processes in assessing and managing climate change related financial risks and opportunities, and in formulating

the related disclosures which inform our investors. In 2017, IPL engaged a specialist third party to conduct a high-level assessment of our climate-related financial risks and opportunities as well as an assessment of our current disclosures against the recommendations of the TCFD. This assessment will be completed in early 2018 and will inform our management strategy going forward.

C2.2c

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

	Relevance & inclusion	Please explain
Current regulation	Relevant, always included	The current Australian Federal Government 'Direct Action' policy includes IPL facilities. "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 regulations 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 operating as currently operated." 2017 IPL Annual Report, Principal Risks, p. 21. Currently, only Australian Federal carbon regulation directly impacts on IPL, and this regulation is currently under policy review.
Emerging regulation	Relevant, always included	"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 regulations 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 operating as currently operated." 2017 IPL Annual Report, Principal Risks, p. 21
Technology	Relevant, always included	"Research and development activity is ongoing, reducing the carbon footprint of products (eg slow release fertilisers and low fume explosives products)." 2017 IPL Annual Report, Principal Risks, p. 21
Legal	Relevant, always included	"IPL's business, and that of its customers and suppliers, is subject to environmental laws and regulations that require specific operating licences and impose various requirements and standards. Changes in these laws and regulations (for example, increased regulation of coal fired energy generation in the US and the imposition of carbon trading schemes), failure to abide by the laws and/or licensing conditions, or changes to licence conditions, may have a detrimental effect on IPL's operations and financial performance, including the need to undertake environmental remediation, financial penalties or ceasing to operate." 2017 IPL Annual Report, Principal Risks, p. 22
Market	Relevant, always included	"Seasonal conditions (particularly rainfall), are a key factor for determining demand and sales of explosives and fertilisers. Any prolonged adverse weather conditions, including the potential impacts of climate change, could impact the future profitability and prospects of IPL" and "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

	Relevance & inclusion	Please explain
		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 and agriculture." 2017 IPL Annual Report, Principal Risks, p. 21
Reputation	Relevant, sometimes included	Reputational risk relating to product quality and IT security has been addressed in the Principal Risks section of the 2017 IPL Annual Report (pp.18 and 22). There is also a reputational risk related to IPL's reporting of the management of climate change related issues. IPL has engaged a specialist third party to conduct an updated high-level assessment of our climate-related financial risks and opportunities as well as an assessment of our current disclosures against the recommendations of the TCFD. This assessment will be completed in early 2018.
Acute physical	Relevant, always included	"Some 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 additional disruption to plants and may interrupt IPL's supply chain, which includes transportation of raw materials and finished product via road, rail and water." 2017 IPL Annual Report, Principal Risks, p. 21
Chronic physical	Relevant, always included	"Seasonal conditions (particularly rainfall), are a key factor for determining demand and sales of explosives and fertilisers. Any prolonged adverse weather conditions, including the potential impacts of climate change, could impact the future profitability and prospects of IPL" and "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 and agriculture." 2017 IPL Annual Report, Principal Risks, p. 21
Upstream	Relevant, always included	"Natural gas supply and price risk: Natural gas is one of the major inputs required for the production of ammonia and therefore is a critical feedstock for IPL's nitrogen manufacturing operations. Availability and quality of natural gas are both key factors when sourcing supply. Potential disruption of supply also poses a risk. The Group has various natural gas contracts and supply arrangements for its plants. In respect of the Australian fertiliser operations, there is a risk that a reliable, committed source of natural gas at economically viable prices may not be available following the expiry of current contractual arrangements. In particular, the current gas supply arrangement for Gibson Island will cease on 30 September 2018 and if economically viable gas cannot be secured for the period commencing 1 October 2018, it is likely the facility will cease manufacturing operations. The cost of natural gas impacts the variable cost of production of ammonia and can influence the plants' overall competitive position." And "2017 IPL Annual Report, Principal Risks, p. 19 and "An increase in the severity and/or frequency of ….. extreme weather events as a result of climate change may …. interrupt IPL's supply chain, which includes transportation of raw materials and finished product via road, rail and water." 2017 IPL Annual Report, Principal Risks, p. 21
Downstream	Relevant, always included	"An increase in the severity and/or frequency of …. extreme weather events as a result of climate change may …. interrupt IPL's supply chain, which includes transportation of raw materials and finished product via road, rail and water." and "Seasonal conditions (particularly rainfall), are a key factor for determining demand and sales of explosives and fertilisers. Any prolonged adverse weather conditions, including the potential impacts of climate change, could impact the future profitability and prospects of IPL" and "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

	Relevance & inclusion	Please explain
		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 and agriculture." 2017 IPL Annual Report, Principal Risks, p. 21

C2.2d

(C2.2d) Describe your process(es) for managing climate-related risks and opportunities.

Risk management processes exist in all businesses. Emerging risks, such as those related to climate change, and appropriate treatment strategies are monitored on an ongoing basis and reported on to the Board through the established risk management process. These include:

• 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, including legal and regulatory risks.

• Each business unit has responsibility for identification and management of risks specific to the business. This is managed through an annual risk workshop, risk register and internal audits aligned to the material business risks.

• Corporate functions are in place to provide sufficient support and guidance to ensure regulatory risks are identified and addressed within the business well in advance.

• Country regulatory risk is regularly reviewed through the Group's risk management framework.

• Where possible, IPL appoints local business leaders and management teams who bring a strong understanding of the local operating environment and strong customer relationships.

• IPL engages with governments and other key stakeholders to ensure potential adverse impacts of proposed fiscal, tax, infrastructure access and regulatory changes are understood and, where possible, mitigated.

Identified risks, risks descriptions, potential consequences and treatment strategies employed by IPL are reported in the *Principal Risks* section of IPL's annual reports where they have been identified as such.

In addition, the longer-term risks associated with climate change were initially assessed in 2010 by an executive cross functional committee established for this specific purpose as part of IPL's Sustainability Strategy, which was formed and approved by the Board in that year. In 2017, IPL engaged a specialist third party to review the longer-term risks and opportunities associated with climate change. This work will be carried out during 2018 and will inform IPL's management strategies going forward.

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

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Reduced revenue from decreased production capacity (e.g., transport difficulties, supply chain interruptions)

Company- specific description

Production, transportation and storage risks: IPL's manufacturing systems are vulnerable to energy or water disruptions and natural disasters which may disrupt IPL's operations and materially affect its financial performance.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Potential financial impact

15000000

Explanation of financial impact

IPL reported a AUD$20 million impact from flood waters which caused a derailment (North West Queensland) in 2016, and a AUD$10 million impact from floods associated with Cyclone Debbie (Queensland, Australia) in 2017.

Management method

• Geographic and market diversification • HSE management system is in place with clear principles and policies communicated to employees. • HSE risk management strategies are employed at all times and across all sites. Incidents are reported and investigated, and learnings are shared throughout the Group. • Appropriate workers' compensation programs are in place globally to assist employees who have been injured while at work, including external insurance coverage. • Management undertakes risk identification and mitigation strategies across all sites. • IPL undertakes business continuity planning and disaster preparedness across all sites. • Global industrial special risk insurance is obtained from a variety of highly rated insurance companies to ensure the appropriate coverage is in place. The policies insure the business, subject to policy and retention limits, from damage to its plants and property and the associated costs arising from business interruptions. • Where possible, flexible supply chain and alternative sourcing solutions are maintained as a contingency. • The Group endeavours to include force majeure clauses in agreements where relevant.

Cost of management

Comment

Identifier

Risk 2

Where in the value chain does the risk driver occur?

Customer

Risk type

Physical risk

Primary climate-related risk driver

Acute: Increased severity of extreme weather events such as cyclones and floods

Type of financial impact driver

Reduced revenues from lower sales/output

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 and agriculture.

Time horizon

Short-term

Likelihood

More likely than not

Magnitude of impact

Medium-low

Potential financial impact

Explanation of financial impact

Management method

• Geographic and market diversification: 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. • 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, as well as geographic spread of markets.

Cost of management

Comment

Identifier

Risk 3

Where in the value chain does the risk driver occur?

Customer

Risk type

Physical risk

Primary climate-related risk driver

Chronic: Changes in precipitation patterns and extreme variability in weather patterns

Type of financial impact driver

Reduced revenues from lower sales/output

Company- specific description

Seasonal conditions (particularly rainfall), are a key factor for determining demand and sales of explosives and fertilisers. Any prolonged adverse weather conditions, including the potential impacts of climate change, could impact the future profitability and prospects of IPL.

Time horizon

Medium-term

Likelihood

About as likely as not

Magnitude of impact

Unknown

Potential financial impact

Explanation of financial impact

Management method

• 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 diversification: 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.

Cost of management

Comment

Identifier

Risk 4

Where in the value chain does the risk driver occur?

Direct operations

Risk type

Transition risk

Primary climate-related risk driver

Market: Increased cost of raw materials

Type of financial impact driver

Market: Abrupt and unexpected shifts in energy costs

Company- specific description

Natural Gas supply and price risk: Natural gas is one of the major inputs required for the production of ammonia and therefore is a critical feedstock for IPL's nitrogen manufacturing operations. Availability and quality of natural gas are both key factors when sourcing supply. Potential disruption of supply also poses a risk.

Time horizon

Current

Likelihood

Very likely

Magnitude of impact
Unknown
Potential financial impact
Explanation of financial impact
In Australia, several market forces have interacted to affect both natural gas pricing and supply. The situation may be temporary or long term and the impacts may range from a marginal increase in costs to closure of sites and/or transitioning to new technologies.
Management method
• Global geographic diversification of major manufacturing sites • The Group has short and medium term gas contracts in place for its Australian manufacturing sites, with the exception of Gibson Island. The contracts have various tenures and pricing mechanisms. As part of normal operations, IPL explores new gas supply arrangements where appropriate. • The US natural gas market is a liquid market, with offtake facilitated by an extensive pipeline infrastructure and pricing commonly referenced to a quoted market price. The Americas business has short term gas supply arrangements in place for its gas needs with market referenced pricing mechanisms. • Gas supply has been substantially contracted for the Waggaman, Louisiana ammonia plant through to 2021, with pricing determined by reference to the price for gas traded through the Henry Hub. • In respect of the Americas business (including the Waggaman, Louisiana ammonia plant), there is an ability to hedge gas prices and the Group reviews its approach to gas hedging in the US on a regular basis.
Cost of management
Comment

Identifier
Risk 5
Where in the value chain does the risk driver occur?
Direct operations
Risk type
Transition risk
Primary climate-related risk driver
Policy and legal: Increased pricing of GHG emissions
Type of financial impact driver
Policy and legal: Increased operating costs (e.g., higher compliance costs, increased insurance premiums)
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 GHG pricing 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. In addition, regulation of coal fired power plants may affect IPL sales to thermal coal mining customers.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Unknown

Potential financial impact

Explanation of financial impact

IPL operates in the Americas and Asia Pacific regions. There is the possibility that the current and/or future Australian government may develop a carbon pricing policy which gives only partial or no exemption to Emissions Intensive Trade Exposed (EITE) industries such as IPL (as is the case with the current 'Direct Action' policy). The use of a carbon pricing policy in North America appears less likely to be used as a strategy to reach emissions targets, although regulation of coal fired power plants may affect IPL sales to thermal coal mining customers.

Management method

• 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, including legal and regulatory risks. • Each business unit has responsibility for identification and management of risks specific to the business. This is managed through an annual risk workshop, risk register and internal audits aligned to the material business risks. • Corporate functions are in place to provide sufficient support and guidance to ensure regulatory risks are identified and addressed within the business well in advance. • Country regulatory risk is regularly reviewed through the Group's risk management framework. • Where possible, IPL appoints local business leaders and management teams who bring a strong understanding of the local operating environment and strong customer relationships. • IPL engages with governments and other key stakeholders to ensure potential adverse impacts of proposed fiscal, tax, infrastructure access and regulatory changes are understood and, where possible, mitigated.

Cost of management

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?

Customer

Opportunity type

Products and services

Primary climate-related opportunity driver

Development and/or expansion of low emission goods and services

Type of financial impact driver

Increased revenue through demand for lower emissions products and services

Company- specific description

Increased market share through continued development of enhanced efficiency and low emissions explosives and fertilisers, including Differential Energy explosives, Green Urea NV fertilisers and ENTEC fertilisers.

Time horizon

Current

Likelihood

Likely

Magnitude of impact

Medium-low

Potential financial impact

Explanation of financial impact

Future financial impact is difficult to quantify. Customer uptake of enhanced efficiency fertilisers, which have been shown to reduce nitrogen losses as N2O (a potent greenhouse gas) and enhanced efficiency explosives, which reduce fossil fuel use (and therefore also GHG) continues to grow.

Strategy to realize opportunity

IPL has three laboratories where research and development of new products is being undertaken to meet the future demand from customers for products with a reduced carbon footprint. In addition, IPL funds joint research projects with several institutions. In 2017, projects included research into soil microbial indicators for efficient use of nitrification inhibitors (low GHG fertilisers), new fertiliser technologies for sustained food security, the further development of low fume explosives for critical areas, and the continued testing of recycled, reclaimed and treated oils, hydrocarbons and waxes to supplement the use of virgin fuel sources in emulsion-based explosives.

Cost to realize opportunity

Comment

Identifier

Opp2

Where in the value chain does the opportunity occur?

Direct operations

Opportunity type

Resource efficiency

Primary climate-related opportunity driver

Other

Type of financial impact driver

Other, please specify (Use of supportive policy incentives)

Company- specific description

Funds may become available for energy efficiency projects which reduce the long-term energy costs and carbon emissions associated with the manufacture of our products, or enable technology changes which reduce GHG.

Time horizon

Short-term

Likelihood

About as likely as not

Magnitude of impact

Medium-low

Potential financial impact

Explanation of financial impact

Financial impact is difficult to quantify. At present, one project has been successfully registered to potentially earn 50,000 carbon credits valued at approximately AUD$10 each. Future policies may offer different levels of funding.

Strategy to realize opportunity

The promotion of available grants to site managers, energy engineers and managers, and capital approvals management within IPL is being coordinated by the Corporate Sustainability Manager, who is part of the finance team and reports through to the CFO. To date, two applications to earn Australian Carbon Credit Units (ACCUs) from energy efficiency projects have been registered with the Australia federal government, with one being successfully registered and one waiting approval.

Cost to realize opportunity

Comment

C2.5

(C2.5) Describe where and how the identified risks and opportunities have impacted your business.

	Impact	Description
Products and services	Impacted for some suppliers, facilities, or product lines	Enhanced efficiency, lower emissions fertilisers and explosives products have been developed and marketed. These continue to be developed.
Supply chain and/or value chain	Impacted for some suppliers, facilities, or product lines	Extreme weather events caused disruption to logistics (rail and road) during 2016 and 2017.
Adaptation and mitigation activities	Impacted for some suppliers, facilities, or product lines	Due to its location in a hurricane zone, the plant was built to comply with wind codes set out by the International Building Code Design Standard IBC 20 and Minimum Design Loads for Buildings and Other Structures ASCE 7-05 which include the relevant standards for wind load, occupancy categories, basic wind speed and exposure. The design was signed off by a Louisiana based certified Professional Engineer with experience in these design standards for the region, where the impacts of future hurricanes must be considered. The required permits also included ensuring that the plant was built at a height above Louisiana's expected future inundation levels.
Investment in R&D	Impacted for some suppliers, facilities, or product lines	Enhanced efficiency, lower emissions fertilisers and explosives products have been developed, and continue to be developed, as part of the R&D budget.
Operations	Not yet impacted	
Other, please specify	Please select	

C2.6

(C2.6) Describe where and how the identified risks and opportunities have factored into your financial planning process.

	Relevance	Description
Revenues	Impacted for some suppliers, facilities, or product lines	Sales of increased efficiency, reduced emissions fertilisers and reduced energy explosives has been factored into revenues.
Operating costs	Impacted for some suppliers, facilities, or product lines	Insurances against impacts associated with extreme weather events (to the extent that these can be insured against) have been factored into operating costs. The development and manufacture of high efficiency, reduced emissions fertilisers and reduced energy explosives has also been factored into operating costs.
Capital expenditures / capital allocation	Impacted for some suppliers, facilities, or product lines	The development and manufacture of increased efficiency, reduced emissions fertilisers and reduced energy explosives has been factored into capital allocation. (Some sites have recently factored in new operational practices, such as running down product stockpiles at certain times of the year to prepare for potential logistics interruption associated with increasingly extreme seasonal weather events. One example of this occurs at our remote Phosphate Hill site in Australia where more extreme flooding events associated with the summer monsoon have interrupted rail services which transport product out of the site. Running down stockpiles ahead of these events reduces the chance that production will need to be interrupted due to a lack of storage. However, this management strategy is not of a scale that impacts financial balance sheets).
Acquisitions and divestments	Impacted	Diversification across markets and geographical locations helps spread exposures. This has been a long-term strategy for IPL due to the nature of our markets: both agriculture and mining are affected by weather and extreme weather events, and there exists volatility in the Australian mining sector.
Access to capital	Not impacted	
Assets	Not impacted	
Liabilities	Not impacted	
Other	Not impacted	

C3. Business Strategy

C3.1

(C3.1) Are climate-related issues integrated into your business strategy?

Yes

C3.1a

(C3.1a) Does your organization use climate-related scenario analysis to inform your business strategy?

No, but we anticipate doing so in the next two years

C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b)

(C-AC3.1b/C-CE3.1b/C-CH3.1b/C-CO3.1b/C-EU3.1b/C-FB3.1b/C-MM3.1b/C-OG3.1b/C-PF3.1b/C-ST3.1b/C-TO3.1b/C-TS3.1b) Indicate whether your organization has developed a low-carbon transition plan to support the long-term business strategy.

No, we do not have a low-carbon transition plan

C3.1c

(C3.1c) Explain how climate-related issues are integrated into your business objectives and strategy.

IPL's main manufacturing process currently relies on sustainable access to natural gas and water, and is energy and GHG emissions intensive. In addition, our farming and mining customers, and therefore our markets, can be impacted by extreme weather events such as droughts, floods, hurricanes and tropical cyclones, as can our own manufacturing facilities. For these reasons, the risks associated with emissions (and regulation of these), access to natural gas and water, and the physical impacts of extreme weather events have been integrated into IPL's existing risk management processes and corporate strategy for many years, with geographical and market diversification remaining a key management strategy. Emerging risks, such as climate change, and appropriate treatment strategies are monitored on an ongoing basis and reported to the Board through the established risk management process. Risks are reported in our Annual Report under 'Principal Risks' where they have been identified as such: see the 2017 IPL Annual Report, *Principal Risks*, pages 17-22 (pages 28-33 o the pdf).

In addition to this comprehensive risk assessment process, the longer term physical and transitional risks and opportunities associated with climate change were initially assessed in 2010 by an executive cross functional committee established for this specific purpose as part of IPL's Sustainability Strategy, which was formed and approved by the Board in that year. This strategy included the employment of several specialists with experience sustainability and climate change. Transitional risks identified at that time include, but are not limited to, compliance, regulatory and legal risk, reputational risk, and changing market sentiment impacting on our markets. The opportunities identified were associated with the development of new products, including our enhanced efficiency fertilisers and energy efficient explosives technologies. Both of these new product ranges reduce greenhouse gas emissions for our customers, with enhanced efficiency fertilisers reducing nitrogen losses to the atmosphere as N2O (a potent greenhouse gas) and energy efficient explosives which reduce the amount of fossil fuels required for a blast, and therefore the amount of greenhouse gases released.

With the release of the G20 Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) report, IPL recognised the need to review its processes in assessing and managing climate change related financial risks and opportunities. In 2017, we engaged a specialist third party to conduct a high-level assessment of our climate-related financial risks and opportunities as well as an assessment of our current disclosures against the recommendations of the TCFD. This assessment will be completed in early 2018 and will coincide with a review of business objectives and overall company strategy being led by IPL's new CEO, Jeanne Johns, who was appointed in 2017.

C3.1g

(C3.1g) Why does your organization not use climate-related scenario analysis to inform your business strategy?

IPL's main manufacturing process currently relies on sustainable access to natural gas and water, and is GHG emissions intensive. In addition, our farming and mining customers, and therefore our markets, can be impacted by extreme weather events such as droughts, floods, hurricanes and tropical cyclones, as can our own manufacturing facilities. For these reasons, the risks associated with emissions (and regulation of these), access to natural gas and water, and the physical impacts of extreme weather events have been integrated into IPL's existing risk management processes and corporate strategy for many years, with geographical and market diversification remaining a key management strategy. Emerging risks, such as climate change, and appropriate treatment strategies are monitored on an ongoing basis and reported on to the Board through the established risk management process . Risks are reported in our Annual Report under 'Principal Risks' where they have been identified as such: see the 2017 IPL Annual Report, *Principal Risks*, pages 17-22 (pages 28-33 of the pdf).

With the release of the G20 Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) report, IPL recognises the need to review its processes in assessing and managing climate change related financial risks and opportunities. In 2017, we engaged a specialist third party to conduct a high-level assessment of our climate-related financial risks and opportunities as well as an assessment of our current disclosures against the recommendations of the TCFD. This assessment will be completed in early 2018 and will inform a review of our climate change management strategy going forward. We anticipate using climate-related scenario analysis during 2018 as part of this reviewed strategy, which will coincide with a review of business objectives and overall company strategy being led by IPL's new CEO, Jeanne Johns, who was appointed in 2017.

C4. Targets and performance

C4.1

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

Intensity target

C4.1b

(C4.1b) Provide details of your emissions intensity target(s) and progress made against those target(s).

Target reference number

Int 1

Scope

Scope 1

% emissions in Scope

71

% reduction from baseline year

2

Metric

Metric tons CO2e per unit of production

Base year

2015

Start year

2015

Normalized baseline year emissions covered by target (metric tons CO2e)

2.14

Target year

2017

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% achieved (emissions)

100

Target status
Replaced
Please explain
A 2% reduction in CO2e per tonne of ammonia produced globally was achieved in 2017 against a 2015 baseline.
% change anticipated in absolute Scope 1+2 emissions
11
% change anticipated in absolute Scope 3 emissions
0

Target reference number
Int 2
Scope
Scope 1
% emissions in Scope
29
% reduction from baseline year
3
Metric
Metric tons CO2e per unit of production
Base year
2015
Start year
2015
Normalized baseline year emissions covered by target (metric tons CO2e)
0.44138
Target year
2017
Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years
% achieved (emissions)
100
Target status

Replaced

Please explain

A 3% reduction in CO2e per tonne of nitric acid produced globally was achieved in 2017 against a 2015 baseline.

% change anticipated in absolute Scope 1+2 emissions

11

% change anticipated in absolute Scope 3 emissions

0

Target reference number

Int 3

Scope

Scope 1

% emissions in Scope

71

% reduction from baseline year

0

Metric

Metric tons CO2e per unit of production

Base year

2015

Start year

2017

Normalized baseline year emissions covered by target (metric tons CO2e)

2.04

Target year

2018

Is this a science-based target?

No, and we do not anticipate setting one in the next 2 years

% achieved (emissions)

0

Target status

Underway

Please explain
Maintain 2.04 tCO2e intensity per tonne of ammonia produced globally (a 2% reduction achieved in 2017 against a 2015 baseline) in 2018
% change anticipated in absolute Scope 1+2 emissions
0
% change anticipated in absolute Scope 3 emissions
0

Target reference number
Int 4
Scope
Scope 1
% emissions in Scope
29
% reduction from baseline year
0
Metric
Metric tons CO2e per unit of production
Base year
2017
Start year
2018
Normalized baseline year emissions covered by target (metric tons CO2e)
0.4
Target year
2018
Is this a science-based target?
No, and we do not anticipate setting one in the next 2 years
% achieved (emissions)
0
Target status
Underway

Please explain
Maintain 0.40 tCO2e intensity per tonne of nitric acid produced globally (a 3% reduction achieved in 2017 against a 2015 baseline) in 2018

% change anticipated in absolute Scope 1+2 emissions
0

% change anticipated in absolute Scope 3 emissions
0

C4.2

(C4.2) Provide details of other key climate-related targets not already reported in question C4.1/a/b.

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 projects at each stage of development, and for those in the implementation stages, the estimated CO2e savings.

	Number of projects	Total estimated annual CO2e savings in metric tonnes CO2e (only for rows marked *)
Under investigation		
To be implemented*		
Implementation commenced*	1	10000
Implemented*	9	12783
Not to be implemented		

C4.3b

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

Activity type
Energy efficiency: Processes
Description of activity
Heat recovery
Estimated annual CO2e savings (metric tonnes CO2e)
10000
Scope
Scope 1
Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)
850000
Investment required (unit currency – as specified in CC0.4)
1100000
Payback period
1-3 years
Estimated lifetime of the initiative
11-15 years
Comment
At our Moranbah, Australia site, a project to preheat deaerator feedwater with process heat (which is currently lost to the atmosphere) will reduce the consumption of steam, and therefore gas, at the deaerator while maintaining its operating pressure. This project began in 2017 with installation to be completed in early 2018.

Activity type
Energy efficiency: Processes
Description of activity
Process optimization
Estimated annual CO2e savings (metric tonnes CO2e)

2305
Scope
Scope 2 (location-based)
Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)
400000
Investment required (unit currency – as specified in CC0.4)
4350000
Payback period
<1 year
Estimated lifetime of the initiative
11-15 years
Comment
This project at our Mt Isa, Australia site involved the installation of variable speed drives on cooling tower fan motors so that the fan speed can be adjusted using an automatic temperature feedback loop. The project was completed in July 2017 and allows airflow across the cooling towers to be controlled to produce cooling water at the optimum temperature required by the manufacturing process. Since the existing cooling tower fans were sized for the maximum load and were run continuously at full speed, the water was unnecessarily overcooled for a large portion of the year. Controlling the cooling tower fan motor speed has reduced the load on the motor and therefore reduced the electrical power used by the motor.

Activity type
Energy efficiency: Building services
Description of activity
Lighting
Estimated annual CO2e savings (metric tonnes CO2e)
215
Scope
Scope 1
Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)

350000

Investment required (unit currency – as specified in CC0.4)

800000

Payback period

1-3 years

Estimated lifetime of the initiative

6-10 years

Comment

Replace current lighting with lower power usage LED lights to reduce both power consumption and maintenance costs at our Phosphate Hill site in Australia. These are scope 1 emissions because the site is in a remote location and has its own gas fired electricity generation plant.

Activity type

Energy efficiency: Processes

Description of activity

Compressed air

Estimated annual CO2e savings (metric tonnes CO2e)

26

Scope

Scope 2 (location-based)

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

2883

Investment required (unit currency – as specified in CC0.4)

5000

Payback period

1-3 years

Estimated lifetime of the initiative

3-5 years

Comment

Identification and repair of air leaks through an audit and repair project at our Wolf Lake manufacturing site in Illinois, USA.

Activity type
Energy efficiency: Processes
Description of activity
Process optimization
Estimated annual CO2e savings (metric tonnes CO2e)
3280
Scope
Scope 1
Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)
223212
Investment required (unit currency – as specified in CC0.4)
115000
Payback period
1-3 years
Estimated lifetime of the initiative
21-30 years
Comment
Application of an internal coating to improve firing efficiency in the primary reformer of the Cheyenne ammonia plant. This was completed during the 2017 maintenance shut down.

Activity type
Energy efficiency: Processes
Description of activity
Process optimization
Estimated annual CO2e savings (metric tonnes CO2e)
35
Scope
Scope 2 (location-based)
Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

102040

Investment required (unit currency – as specified in CC0.4)

0

Payback period

<1 year

Estimated lifetime of the initiative

6-10 years

Comment

At Cheyenne #2 LoDAN, work was completed to increase the efficiency of the scrubber pumps to reduce power consumption. This project was completed early in the 2017 IPL financial year and is on track to exceed projected savings of AUD$17,620.

Activity type

Energy efficiency: Processes

Description of activity

Process optimization

Estimated annual CO2e savings (metric tonnes CO2e)

765

Scope

Scope 1

Voluntary/Mandatory

Voluntary

Annual monetary savings (unit currency – as specified in CC0.4)

450000

Investment required (unit currency – as specified in CC0.4)

123000

Payback period

4 - 10 years

Estimated lifetime of the initiative

21-30 years

Comment

At the Cheyenne #4 Nitric Acid Plant, the Tail Gas Heater was bypassed to increase the efficiency of heat exchange. This project was completed in 2017 and is on track to exceed projected savings.

Activity type
Energy efficiency: Processes
Description of activity
Process optimization
Estimated annual CO2e savings (metric tonnes CO2e)
50
Scope
Scope 2 (location-based)
Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)
14000
Investment required (unit currency – as specified in CC0.4)
0
Payback period
<1 year
Estimated lifetime of the initiative
6-10 years
Comment
At the Cheyenne Urea Plant, the Cooling Water Booster Pump was modified to run at a lower speed, reducing electrical demand.

Activity type
Energy efficiency: Processes
Description of activity
Process optimization
Estimated annual CO2e savings (metric tonnes CO2e)
1550
Scope
Scope 1

Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)
144131
Investment required (unit currency – as specified in CC0.4)
0
Payback period
<1 year
Estimated lifetime of the initiative
21-30 years
Comment
The Cheyenne Urea Plant Boiler operation was optimsed to meet demand needs only.

Activity type
Energy efficiency: Processes
Description of activity
Process optimization
Estimated annual CO2e savings (metric tonnes CO2e)
4557
Scope
Scope 1
Voluntary/Mandatory
Voluntary
Annual monetary savings (unit currency – as specified in CC0.4)
309946
Investment required (unit currency – as specified in CC0.4)
0
Payback period
<1 year
Estimated lifetime of the initiative
11-15 years
Comment

General Steam Saving Projects were conducted to minimize excess steam.

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 a dedicated R&D budget for product development which includes research and development of slow release (reduced nitrous oxide emitting) fertiliser products and reduced energy explosives products and delivery systems.
Internal incentives/recognition programs	Consistent improvement in energy efficiency, which also reduces IPL's greenhouse gas emissions, is a key part of BEx (Business Excellence) process reviews across our manufacturing business, with quarterly MD&CEO Values Awards program recognising team and individual efforts. Annual bonuses are also linked to the performance goals of energy managers, facility managers and Executive Team members.
Employee engagement	Consistent improvement in energy efficiency is a key part of BEx (Business Excellence) process review across our manufacturing business. BEx (Business Excellence) is IPL's continuous improvement system and engages 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 reduced greenhouse gas emissions, but also delivers costs savings.
Other	The use of best available energy efficiency technologies in plant upgrades and the design and construction of new manufacturing facilities. This reduces both our energy use, which is a major cost to our business, and the greenhouse gases associated with this energy use. The technology used in the new Waggaman, Louisiana Ammonia Plant underpinned IPL's intensity reduction target of a 2% reduction in tCO2e per tonne of ammonia produced in 2017 against a 2015 baseline.

C4.5

(C4.5) Do you classify any of your existing goods and/or services as low-carbon products or do they enable a third party to avoid GHG emissions?

Yes

C4.5a

(C4.5a) Provide details of your products and/or services that you classify as low-carbon products or that enable a third party to avoid GHG emissions.

Level of aggregation
Group of products
Description of product/Group of products
Green Urea NV products contain urea treated with the urease inhibitor, N-(n-butyl) thiophosphoric triamide (NBPT), which delays hydrolysis of urea into unstable forms that may be lost to the atmosphere, thereby reducing emissions related to fertiliser usage.
Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions
Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (www.piccc.org.au/research/project/269)
% revenue from low carbon product(s) in the reporting year
2
Comment
Losses of N2O (a potent greenhouse gas) to the atmosphere are estimated to be reduced by a conservative 50%, but are difficult to quantify due to being affected by precipitation and application techniques. Agronomy services and education are provided to customers to increase knowledge and maximise emissions reductions.

Level of aggregation
Product
Description of product/Group of products
Entec® is a fertiliser treatment that retains nitrogen in the stable ammonium form for an extended period. This reduces nitrogen losses to leaching (waterways) and denitrification (losses to the atmosphere as the GHG N2O) while conserving more nitrogen for plant uptake. Both trials and customer use continue to demonstrate the potential for significant reductions in GHG as well as yield increase with the use of Entec (see pages 35-42 of the Australian Sugarcane Annual 2016 and Less Nitrogen Lost is More Gain in Cane, also in the Australian Canegrower, Sept 2017).
Are these low-carbon product(s) or do they enable avoided emissions?
Avoided emissions
Taxonomy, project or methodology used to classify product(s) as low-carbon or to calculate avoided emissions
Other, please specify (www.piccc.org.au/research/project/269)
% revenue from low carbon product(s) in the reporting year
2
Comment

Losses of N2O (a potent greenhouse gas) to the atmosphere are estimated to be reduced by a conservative 50%, but are difficult to quantify due to being affected by precipitation and application techniques. Agronomy services and education are provided to customers to increase knowledge and maximise emissions reductions. See also ‘Case Study: ENTEC use means peace of mind, less nitrogen losses and more gain in cane’ at https://www.incitecpivot.com.au/sustainability/ipl-online-sustainability-report/products-and-services/fertiliser-research-and-development in the online 2017 IPL Sustainability report.

C5. Emissions methodology

C5.1

(C5.1) Provide your base year and base year emissions (Scopes 1 and 2).

Scope 1

Base year start

October 1 2014

Base year end

September 30 2015

Base year emissions (metric tons CO2e)

2349535

Comment

Scope 2 (location-based)

Base year start

October 1 2014

Base year end

September 30 2015

Base year emissions (metric tons CO2e)

355916

Comment

Scope 2 (market-based)

Base year start

Base year end

Base year emissions (metric tons CO2e)

Comment

C5.2

(C5.2) Select the name of the standard, protocol, or methodology you have used to collect activity data and calculate Scope 1 and Scope 2 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)

C6. Emissions data

C6.1

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

Row 1

Gross global Scope 1 emissions (metric tons CO2e)

2749847

End-year of reporting period

<Not Applicable>

Comment

Row 2

Gross global Scope 1 emissions (metric tons CO2e)

<Not Applicable>

End-year of reporting period

<Not Applicable>

Comment

<Not Applicable>

Row 3

Gross global Scope 1 emissions (metric tons CO2e)

<Not Applicable>

End-year of reporting period

<Not Applicable>

Comment

<Not Applicable>

Row 4

Gross global Scope 1 emissions (metric tons CO2e)

<Not Applicable>

End-year of reporting period

<Not Applicable>

Comment

<Not Applicable>

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?

Row 1

Scope 2, location-based

336707

Scope 2, market-based (if applicable)

<Not Applicable>

End-year of reporting period

<Not Applicable>

Comment

Row 2

Scope 2, location-based

<Not Applicable>
Scope 2, market-based (if applicable)
<Not Applicable>
End-year of reporting period
<Not Applicable>
Comment
<Not Applicable>
Row 3
Scope 2, location-based
<Not Applicable>
Scope 2, market-based (if applicable)
<Not Applicable>
End-year of reporting period
<Not Applicable>
Comment
<Not Applicable>
Row 4
Scope 2, location-based
<Not Applicable>
Scope 2, market-based (if applicable)
<Not Applicable>
End-year of reporting period
<Not Applicable>
Comment
<Not Applicable>

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 evaluated

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 the source is excluded

Data is presently unavailable. Very low materiality (estimated to be less than 1% of total emissions).

Source

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

Relevance of Scope 1 emissions from this source

Emissions are not evaluated

Relevance of location-based Scope 2 emissions from this source

Emissions are not evaluated

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

Emissions are not evaluated

Explain why the source is excluded

Data is presently unavailable. Very low materiality (estimated to be less than 1% of total emissions).

Source

Emissions from operations in Chile.

Relevance of Scope 1 emissions from this source

Emissions are not evaluated

Relevance of location-based Scope 2 emissions from this source

Emissions are not evaluated

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

Emissions are not evaluated

Explain why the source is excluded

Very low materiality (estimated to be less than 1% of total emissions).

C6.5

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

Purchased goods and services

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Capital goods

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

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

Evaluation status

Relevant, not yet calculated

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Upstream transportation and distribution

Evaluation status

Relevant, calculated

Metric tonnes CO2e
73142
Emissions calculation methodology
Standard approach and verification – EN16258:2012
Percentage of emissions calculated using data obtained from suppliers or value chain partners
100
Explanation
As part of our engagement with our global shipping suppliers we are able to quantify the Scope 3 emissions associated with our global shipping. Through an opportunity provided by Rightship and CBL Markets in 2017, we are pleased to report that we were also able to offset these emissions through the purchase of verified voluntary carbon credits.
Waste generated in operations
Evaluation status
Relevant, not yet calculated
Metric tonnes CO2e
Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Business travel
Evaluation status
Relevant, not yet calculated
Metric tonnes CO2e
Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Employee commuting
Evaluation status
Relevant, not yet calculated
Metric tonnes CO2e
Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Upstream leased assets

Evaluation status
Not relevant, explanation provided
Metric tonnes CO2e
Emissions calculation methodology
IPL has no upstream leased assets.
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Downstream transportation and distribution
Evaluation status
Relevant, not yet calculated
Metric tonnes CO2e
Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Processing of sold products
Evaluation status
Not relevant, explanation provided
Metric tonnes CO2e
Emissions calculation methodology
There is no further processing for 99% of IPL's products (by weight).
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Use of sold products
Evaluation status
Relevant, not yet calculated
Metric tonnes CO2e
Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
End of life treatment of sold products
Evaluation status
Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

There is no end of life treatment required for 99% of IPL's products (by weight). The products are consumed during use by the customer.

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

Explanation

Downstream leased assets

Evaluation status

Not evaluated

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Franchises

Evaluation status

Not relevant, explanation provided

Metric tonnes CO2e

Emissions calculation methodology

IPL has no franchises.

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

Explanation

Investments

Evaluation status

Not evaluated

Metric tonnes CO2e

Emissions calculation methodology

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

Explanation

Other (upstream)

Evaluation status

Not evaluated

Metric tonnes CO2e

Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation
Other (downstream)
Evaluation status
Not evaluated
Metric tonnes CO2e
Emissions calculation methodology
Percentage of emissions calculated using data obtained from suppliers or value chain partners
Explanation

C6.7

(C6.7) Are carbon dioxide emissions from biologically sequestered 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
0.0008736
Metric numerator (Gross global combined Scope 1 and 2 emissions)
3086553
Metric denominator
unit total revenue
Metric denominator: Unit total
3533100000
Scope 2 figure used
Location-based
% change from previous year
7.3
Direction of change

Increased

Reason for change

IPL's total global emissions increased due to the operation of the new Waggaman, Louisiana plant, which was completed in late 2016 and came under IPL's operational control early in the 2017 IPL financial year, which is this reporting period. This increased emissions by 11%, but reduced intensity per tonne of ammonia produced and intensity per unit of Net Profit.

Intensity figure

9684.82

Metric numerator (Gross global combined Scope 1 and 2 emissions)

3086553

Metric denominator

Other, please specify (AUD$ Net Profit)

Metric denominator: Unit total

318.7

Scope 2 figure used

Location-based

% change from previous year

55

Direction of change

Decreased

Reason for change

Net profit increased by 146% while emissions increased by 11%.

Intensity figure

0.8342

Metric numerator (Gross global combined Scope 1 and 2 emissions)

3086553

Metric denominator

Other, please specify (Tonnes of product manufactured for sale)

Metric denominator: Unit total

3700000

Scope 2 figure used

Location-based

% change from previous year

7

Direction of change

Decreased

Reason for change

Production increased by 19% while emissions increased by only 11%. This is due to the new Waggaman, Louisiana ammonia plant, which was built using the best available Selective Catalytic Reduction technology, making it among the most efficient plants of its kind in the world. This plant, along with other emissions reduction initiatives at other plants, allowed IPL to exceed its two-year GHG intensity reduction targets of a 2% reduction in GHG emissions per tonne of ammonia produced, and a 3% reduction in GHG emissions per tonne of nitric acid produced.

C7. Emissions breakdowns

C7.1

(C7.1) Does your organization have greenhouse gas emissions other than carbon dioxide?

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	2492175.2	IPCC Fourth Assessment Report (AR4 - 20 year)
CH4	2994.1	IPCC Fourth Assessment Report (AR4 - 20 year)
N2O	254667.5	IPCC Fourth Assessment Report (AR4 - 20 year)
SF6	10	IPCC Fourth Assessment Report (AR4 - 20 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	1486693
North America	1262619
Turkey	534

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	986053
Dyno Nobel Explosives	1763793

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	Net Scope 1 emissions , metric tons CO2e	Comment
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	2749847	<Not Applicable>	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.
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Electric utility generation activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

	Gross Scope 1 emissions, metric tons CO2e	Net Scope 1 emissions , metric tons CO2e	Comment
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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)	Purchased and consumed electricity, heat, steam or cooling (MWh)	Purchased and consumed low-carbon electricity, heat, steam or cooling accounted in market-based approach (MWh)
Australia	170724		206769	0
North America	165453		414729	0
Turkey	529		1843	0

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 emissions (metric tons CO2e)	Scope 2, market-based emissions (metric tons CO2e)
Incitec Pivot Fertilisers	167756	
Dyno Nobel Explosives	168951	

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
Cement production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Chemicals production activities	336707		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.
Coal production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Metals and mining production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (upstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Oil and gas production activities (downstream)	<Not Applicable>	<Not Applicable>	<Not Applicable>
Steel production activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport OEM activities	<Not Applicable>	<Not Applicable>	<Not Applicable>
Transport services activities	<Not Applicable>	<Not Applicable>	<Not Applicable>

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
Please select		

C-CH7.8a

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

	Sales, metric tons	Comment
Carbon dioxide (CO2)	216433	IPL captures and sells CO2 at several sites. At Waggaman Louisiana, the CO2 is supplied directly to a neighbouring chemicals company where it is used to make melamine.
Methane (CH4)		
Nitrous oxide (N2O)		
Hydrofluorocarbons (HFC)		
Perfluorocarbons (PFC)		
Sulphur hexafluoride (SF6)		
Nitrogen trifluoride (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?

Increased

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		<Not Applicable>		
Other emissions reduction activities	104239	Decreased	3.9	SCR abatement at LOMO + Phos Hill LED Lighting + Cheyenne Scope 1 Projects + Cheyenne Scope 2 projects + Mt Isa VSD Cooling Fans (2016) + St Helens Instrumentation (2016) + New WALA plant efficiencies (2016) = ((20,000 + 215 + 10,152 + 111 + 2,302 + 527 + 73345)/ 2760263*100 = 3.9%
Divestment		<Not Applicable>		
Acquisitions		<Not Applicable>		
Mergers		<Not Applicable>		
Change in output	397882	Increased	13.9	Increased production in ammonia in North America (WALA) + decreased production in Asia Pacific = ((397882.00-13284)/ 2760263*100) = 13.9% The increased production in North America was due to the start-up of the new high efficiency Waggaman, Louisiana (WALA) ammonia plant in early 2017 FY. In 2017, this plant increased IPL's gas consumption for feedstock (conversion of gas to ammonia) by 63% globally, but increased consumption of gas for energy to drive this conversion process by only 1% globally. This efficiency resulted in a 2% decrease in GHG emissions per tonne of ammonia produced globally by IPL in 2017 against a 2015 baseline.
Change in methodology		<Not Applicable>		
Change in boundary		<Not Applicable>		

	Change in emissions (metric tons CO2e)	Direction of change	Emissions value (percentage)	Please explain calculation
Change in physical operating conditions		<Not Applicable>		
Unidentified		<Not Applicable>		
Other		<Not Applicable>		

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 undertakes this energy-related activity
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 MWh
Consumption of fuel (excluding feedstock)	Please select		5796310	5796310
Consumption of purchased or acquired electricity	<Not Applicable>		623346	623346
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>		<Not Applicable>	

	Heating value	MWh from renewable sources	MWh from non-renewable sources	Total MWh
Total energy consumption	<Not Applicable>		6419656	6419656

C-CH8.2a

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

	Heating value	Total MWh
Consumption of fuel (excluding feedstock)	Please select	5796310
Consumption of purchased or acquired electricity	<Not Applicable>	623346
Consumption of purchased or acquired heat	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired steam	<Not Applicable>	<Not Applicable>
Consumption of purchased or acquired cooling	<Not Applicable>	<Not Applicable>
Consumption of self-generated non-fuel renewable energy	<Not Applicable>	
Total energy consumption	<Not Applicable>	6419656

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 steam	Yes
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.

Fuels (excluding feedstocks)
Natural Gas
Heating value
Please select
Total fuel MWh consumed by the organization
5708294
MWh fuel consumed for the self-generation of electricity
838093
MWh fuel consumed for self-generation of heat
MWh fuel consumed for self-generation of steam
MWh fuel consumed for self-generation of cooling
<Not Applicable>
MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Fuels (excluding feedstocks)
Diesel
Heating value
Please select
Total fuel MWh consumed by the organization
84040
MWh fuel consumed for the self-generation of electricity
MWh fuel consumed for self-generation of heat
0
MWh fuel consumed for self-generation of steam
MWh fuel consumed for self-generation of cooling
<Not Applicable>
MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)
Petrol
Heating value
Please select
Total fuel MWh consumed by the organization
2796
MWh fuel consumed for the self-generation of electricity
0
MWh fuel consumed for self-generation of heat
0
MWh fuel consumed for self-generation of steam
0
MWh fuel consumed for self-generation of cooling
<Not Applicable>
MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

Fuels (excluding feedstocks)
Propane Gas
Heating value
Please select
Total fuel MWh consumed by the organization
99
MWh fuel consumed for the self-generation of electricity
0
MWh fuel consumed for self-generation of heat
MWh fuel consumed for self-generation of steam
MWh fuel consumed for self-generation of cooling
<Not Applicable>
MWh fuel consumed for self- cogeneration or self-trigeneration

<Not Applicable>

Fuels (excluding feedstocks)
Fuel Oil Number 1
Heating value
Please select
Total fuel MWh consumed by the organization
73
MWh fuel consumed for the self-generation of electricity
0
MWh fuel consumed for self-generation of heat
MWh fuel consumed for self-generation of steam
MWh fuel consumed for self-generation of cooling
<Not Applicable>
MWh fuel consumed for self- cogeneration or self-trigeneration
<Not Applicable>

C8.2d

(C8.2d) List the average emission factors of the fuels reported in C8.2c.
Acetylene
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Agricultural Waste
Emission factor

<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Alternative Kiln Fuel (Wastes)
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Animal Fat
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Animal/Bone Meal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>

Comment
<Not Applicable>
Anthracite Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Asphalt
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Aviation Gasoline
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Bagasse
Emission factor
<Not Applicable>

Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Bamboo
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Basic Oxygen Furnace Gas (LD Gas)
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Biodiesel
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment

<Not Applicable>
Biodiesel Tallow
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Biodiesel Waste Cooking Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Bioethanol
Emission factor
<Not Applicable>
Unit
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Emission factor source
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Comment
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Biogas
Emission factor
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Unit

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Biogasoline
Emission factor
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Emission factor source
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Comment
<Not Applicable>
Biomass Municipal Waste
Emission factor
<Not Applicable>
Unit
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Emission factor source
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Comment
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Biomethane
Emission factor
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Bitumen
Emission factor
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Unit
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Emission factor source
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Comment
<Not Applicable>
Bituminous Coal
Emission factor
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Unit
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Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Black Liquor
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Blast Furnace Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>

Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Brown Coal Briquettes (BKB)
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Burning Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Butane
Emission factor
<Not Applicable>
Unit
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Comment
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Butylene

Emission factor
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Unit
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Comment
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Charcoal
Emission factor
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Unit
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Emission factor source
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Comment
<Not Applicable>
Coal
Emission factor
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Unit
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Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Coal Tar
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source

<Not Applicable>
Comment
<Not Applicable>
Coke
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Coke Oven Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Coking Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Compressed Natural Gas (CNG)
Emission factor

<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Condensate
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Crude Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Crude Oil Extra Heavy
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>

Comment
<Not Applicable>
Crude Oil Heavy
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Crude Oil Light
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Diesel
Emission factor
2691.19
Unit
metric tons CO2e per liter
Emission factor source
National Greenhouse and Energy Reporting Scheme Measurement: Technical Guidelines for the estimation of emissions by facilities in Australia (Applies to the estimation of emissions in the 2016-17 reporting year) p.146
Comment
The emissions factor reported in column 2 is metric tonnes of CO2e per litre of diesel combusted. MWh values for diesel reported throughout Question 8 are kL diesel x 38.6 (NGER Energy Content Factor in GJ/kL) =GJ converted directly to MWh (GJ x 0.277778). The

default emission factor (Method 1 under NGER) for diesel under NGER is 2709.72 tCO2e per litre of diesel burned for ‘stationary’ energy purposes (defined as ‘on-site’ uses).

Distillate Oil

Emission factor

<Not Applicable>

Unit

<Not Applicable>

Emission factor source

<Not Applicable>

Comment

<Not Applicable>

Dried Sewage Sludge

Emission factor

<Not Applicable>

Unit

<Not Applicable>

Emission factor source

<Not Applicable>

Comment

<Not Applicable>

Ethane

Emission factor

<Not Applicable>

Unit

<Not Applicable>

Emission factor source

<Not Applicable>

Comment

<Not Applicable>

Ethylene

Emission factor

<Not Applicable>

Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Fuel Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Fuel Oil Number 1
Emission factor
2931.448
Unit
metric tons CO2e per liter
Emission factor source
National Greenhouse and Energy Reporting Scheme Measurement: Technical Guidelines for the estimation of emissions by facilities in Australia (Applies to the estimation of emissions in the 2016-17 reporting year) p.146
Comment
The emissions factor reported is metric tonnes of CO2e per litre of fuel oil combusted. MWh values for fuel oil reported throughout Question 8 are kL fuel oil x 39.7 (NGER Energy Content Factor in GJ/kL) converted directly to MWh (GJ x 0.277778). The default emission factor (Method 1 under NGER) for fuel under NGER is 2931.448 tCO2e per litre of fuel oil burned.
Fuel Oil Number 2
Emission factor
<Not Applicable>
Unit
<Not Applicable>

Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Fuel Oil Number 4
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Fuel Oil Number 5
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Fuel Oil Number 6
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Gas Coke

Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Gas Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Gas Works Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
GCI Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source

<Not Applicable>
Comment
<Not Applicable>
General Municipal Waste
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Grass
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Hardwood
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Heavy Gas Oil
Emission factor

<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Hydrogen
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Industrial Wastes
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Isobutane
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>

Comment
<Not Applicable>
Isobutylene
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Jet Gasoline
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Jet Kerosene
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Kerosene
Emission factor
<Not Applicable>

Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Landfill Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Light Distillate
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Lignite Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment

<Not Applicable>
Liquefied Natural Gas (LNG)
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Liquefied Petroleum Gas (LPG)
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Liquid Biofuel
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Lubricants
Emission factor
<Not Applicable>
Unit

<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Marine Fuel Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Marine Gas Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Metallurgical Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>

Methane
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Motor Gasoline
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Naphtha
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Natural Gas
Emission factor
0.05133
Unit
metric tons CO2e per GJ

Emission factor source
National Greenhouse and Energy Reporting Scheme Measurement: Technical Guidelines for the estimation of emissions by facilities in Australia (Applies to the estimation of emissions in the 2016-17 reporting year) p.549
Comment
The emissions factor reported in column 2 is metric tonnes of CO2e per GJ of gas combusted. MWh values for natural gas reported throughout Question 8 are GJ gas converted directly to MWh (GJ x 0.277778). The default emission factor (Method 1 under NGER) for natural gas under NGER is 0.05133 tCO2e per GJ gas burned. This has been used for natural gas combusted for energy (as opposed to natural gas chemically separated for use as a hydrogen feedstock) in all plants except three in Australia, which use emission factors derived from continuous chromatic gas analysis (Method 2 under NGER). These emission factors were 0.049563, 0.0503274 and 0.050234.
Natural Gas Liquids (NGL)
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Natural Gasoline
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Non-Biomass Municipal Waste
Emission factor
<Not Applicable>
Unit

<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Non-Biomass Waste
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Oil Sands
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Oil Shale
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>

Orimulsion
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Other Petroleum Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Paraffin Waxes
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Patent Fuel
Emission factor
<Not Applicable>
Unit
<Not Applicable>

Emission factor source
<Not Applicable>
Comment
<Not Applicable>
PCI Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Peat
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Pentanes Plus
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Petrochemical Feedstocks

Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Petrol
Emission factor
2230.94
Unit
metric tons CO2e per liter
Emission factor source
National Greenhouse and Energy Reporting Scheme Measurement: Technical Guidelines for the estimation of emissions by facilities in Australia (Applies to the estimation of emissions in the 2016-17 reporting year) p.146
Comment
The emissions factor reported in column 2 is metric tonnes of CO2e per litre of petrol combusted. MWh values for petrol reported throughout Question 8 are kL petrol x 33.1 (NGER Energy Content Factor in GJ/kL) converted directly to MWh (GJ x 0.277778). The default emission factor (Method 1 under NGER) for petrol under NGER is 2230.94 tCO2e per litre of petrol burned.
Petroleum Coke
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Petroleum Products
Emission factor
<Not Applicable>

Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Pitch
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Plastics
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Primary Solid Biomass
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment

<Not Applicable>

Propane Gas

Emission factor

1557.42

Unit

metric tons CO2e per liter

Emission factor source

National Greenhouse and Energy Reporting Scheme Measurement: Technical Guidelines for the estimation of emissions by facilities in Australia (Applies to the estimation of emissions in the 2016-17 reporting year) p.146 (LPG)

Comment

The emissions factor reported is metric tonnes of CO2e per litre of LPG combusted. MWh values for LPG reported throughout Question 8 are kL LPG x 25.7 (NGER Energy Content Factor in GJ/kL) converted directly to MWh (GJ x 0.277778). The default emission factor (Method 1 under NGER) for fuel under NGER is 1557.42 tCO2e per litre of LPG burned.

Propane Liquid

Emission factor

<Not Applicable>

Unit

<Not Applicable>

Emission factor source

<Not Applicable>

Comment

<Not Applicable>

Propylene

Emission factor

<Not Applicable>

Unit

<Not Applicable>

Emission factor source

<Not Applicable>

Comment

<Not Applicable>

Refinery Feedstocks

Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Refinery Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Refinery Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Residual Fuel Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source

<Not Applicable>
Comment
<Not Applicable>
Road Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
SBP
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Shale Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Sludge Gas
Emission factor

<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Softwood
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Solid Biomass Waste
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Special Naphtha
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>

Comment
<Not Applicable>
Still Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Straw
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Subbituminous Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Sulphite Lyes
Emission factor
<Not Applicable>

Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Tar
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Tar Sands
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Thermal Coal
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment

<Not Applicable>
Thermal Coal Commercial
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Thermal Coal Domestic
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Thermal Coal Industrial
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Tires
Emission factor
<Not Applicable>
Unit

<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Town Gas
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Unfinished Oils
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Vegetable Oil
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>

Waste Oils
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Waste Paper and Card
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Waste Plastics
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Waste Tires
Emission factor
<Not Applicable>
Unit
<Not Applicable>

Emission factor source
<Not Applicable>
Comment
<Not Applicable>
White Spirit
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Wood
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Wood Chips
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Wood Logs

Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Wood Pellets
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Wood Waste
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source
<Not Applicable>
Comment
<Not Applicable>
Other
Emission factor
<Not Applicable>
Unit
<Not Applicable>
Emission factor source

<Not Applicable>

Comment

<Not Applicable>

C8.2e

(C8.2e) 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	258019.67	258019.67	0	0
Heat				
Steam				
Cooling				

C-CH8.2e

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

	Total gross generation (MWh) inside chemicals sector boundary	Generation that is consumed (MWh) inside chemicals sector boundary
Electricity	258019.67	258019.67
Heat		
Steam		
Cooling		

C8.2f

(C8.2f) Provide details on the electricity, heat, steam and/or cooling amounts that were accounted for at a low-carbon emission factor in the market-based Scope 2 figure reported in C6.3.

Basis for applying a low-carbon emission factor

No purchases or generation of low-carbon electricity, heat, steam or cooling accounted with a low-carbon emission factor

Low-carbon technology type
<Not Applicable>
MWh consumed associated with low-carbon electricity, heat, steam or cooling
<Not Applicable>
Emission factor (in units of metric tons CO2e per MWh)
<Not Applicable>
Comment

C-CH8.3

(C-CH8.3) Disclose details on your organization's consumption of feedstocks for chemical production activities.
Feedstocks
Natural gas
Total consumption
34564866
Total consumption unit
Please select
Inherent carbon dioxide emission factor of feedstock, metric tons CO2 per consumption unit
0.05
Heating value of feedstock, MWh per consumption unit
Heating value
Please select
Comment
The consumption unit reported is GJ of natural gas. The emission factor reported is tCO2e per GJ gas. The default emission factor (Method 1 under NGER) for natural gas used as a feedstock for making ammonia under NGER is 0.0512 tCO2e per GJ gas consumed. This has been used for natural gas chemically separated for use as a hydrogen feedstock in all plants except three in Australia, which use emission factors derived from continuous chromatic gas analysis (Method 2 under NGER). In 2016 these emission factors were 0.04924, 0.049310 and 0.049624. These lower emission factors are due to the natural gas being coal seam methane which has a lower carbon content.

C-CH8.3a

(C-CH8.3a) 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	
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)
1359280
Capacity (metric tons)
Direct emissions intensity (metric tons CO2e per metric ton of product)
2.04
Electricity intensity (MWh per metric ton of product)
Steam intensity (MWh per metric ton of product)
Steam/ heat recovered (MWh per metric ton of product)
Comment
This is a 2% reduction against 2015 intensities.

Output product
Nitric acid
Production (metric tons)
831984
Capacity (metric tons)
Direct emissions intensity (metric tons CO2e per metric ton of product)
0.4
Electricity intensity (MWh per metric ton of product)
Steam intensity (MWh per metric ton of product)
Steam/ heat recovered (MWh per metric ton of product)

Comment
This is a 3% reduction against 2015 intensities.

C-CH9.6

(C-CH9.6) Disclose your organization's low-carbon investments for chemical production activities.
Investment start date
January 1 2007
Investment end date
Investment area
R&D
Technology area
Other, please specify (Low GHG emitting fertilisers)
Investment maturity
Applied research and development
Investment figure
1200000
Low-carbon investment percentage
81 - 100%
Please explain
IPL has been developing and marketing enhanced efficiency fertilisers which have been shown to reduce GHG emissions to the atmosphere (as nitrous oxide) for approximately 10 years, with applied research currently ongoing.

Investment start date
January 1 2007
Investment end date
Investment area
Products
Technology area
Other, please specify (Low GHG emitting fertilisers)
Investment maturity

Large scale commercial deployment

Investment figure

3000000

Low-carbon investment percentage

81 - 100%

Please explain

IPL estimates a capital investment of approximately $1million, with training and promotional costs of approximately $2million (when employee costs are included) in the large scale commercial deployment of our Green Urea NV and Entec products, which continue to demonstrate the potential for significant reductions in GHG during their use.

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	No third-party verification or assurance

C10.1a

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

Scope

Scope 1

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
Incitec Pivot_NGER Limited Assurance Opinion_final 20102017.pdf
Page/ section reference
Relevant standard
ASAE3000
Proportion of reported emissions verified (%)
54

Scope
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
Incitec Pivot_NGER Limited Assurance Opinion_final 20102017.pdf
Page/ section reference
Relevant standard
Please select
Proportion of reported emissions verified (%)
51

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	Other, please specify (Other, please specify: Australian energy)	ASAE3000	53% of IPL's energy use (100% of our Australian energy use) 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. The assurance statement attached at CC10.1a includes this energy assurance.

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

C11.1b

(C11.1b) Complete the following table for each of the emissions trading systems in which you participate.

Alberta SGER

% of Scope 1 emissions covered by the ETS
<Not Applicable>

Period start date
<Not Applicable>

Period end date
<Not Applicable>

Allowances allocated
<Not Applicable>

Allowances purchased
<Not Applicable>

Verified emissions in metric tons CO2e
<Not Applicable>

Details of ownership
<Not Applicable>

Comment
<Not Applicable>

Australia ERF Safeguard Mechanism

% of Scope 1 emissions covered by the ETS
53.5
Period start date
June 30 2016
Period end date
July 1 2017
Allowances allocated
0
Allowances purchased
0
Verified emissions in metric tons CO2e
1626542
Details of ownership
Facilities we own and operate
Comment
IPL's three ammonia manufacturing facilities in Australia are captured under the Australian ERF Safeguard Mechanism, a part of the 'Direct Action' policy. These three sites make up more 99% of IPL's Australian SCope 1 emissions and more than 90% of IPL's Scope 1 plus Scope 2 emissions. The amount reported as 'Verified Emissions' in this question is the total Australian Scope 1 and Scope 2 emissions verified by NGER audit for the year ending June 2017. The 'allowances allocated' and 'allowances purchased' are zero because none of the three sites exceeded their emissions baselines.
BC GGIRCA
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e

<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Beijing pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
California CaT
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased

<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
China national ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Chongqing pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated

<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
EU ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Fujian pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date

<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Guangdong pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Hubei pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date

<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Kazakhstan ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Korea ETS
% of Scope 1 emissions covered by the ETS

<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Massachusetts state ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>

New Zealand ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Ontario CaT
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>

Comment
<Not Applicable>
Québec CaT
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
RGGI
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>

Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Saitama ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Shanghai pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>

Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Shenzhen pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Switzerland ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>

Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Tianjin pilot ETS
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Tokyo CaT
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>

Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Washington CAR
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Other ETS, please specify
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>

Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Other ETS, please specify
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Other ETS, please specify
% of Scope 1 emissions covered by the ETS
<Not Applicable>

Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Other ETS, please specify
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Other ETS, please specify

% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment
<Not Applicable>
Other ETS, please specify
% of Scope 1 emissions covered by the ETS
<Not Applicable>
Period start date
<Not Applicable>
Period end date
<Not Applicable>
Allowances allocated
<Not Applicable>
Allowances purchased
<Not Applicable>
Verified emissions in metric tons CO2e
<Not Applicable>
Details of ownership
<Not Applicable>
Comment

<Not Applicable>

C11.1d

(C11.1d) What is your strategy for complying with the systems in which you participate or anticipate participating?

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 by the IPL Board. The Managing Director & CEO and his/her direct reports form the Executive Team. Both responsibility for the management of compliance with carbon pricing policies and financial risk management (inclusive of the Australian ERF Safeguard Mechanism) resides with the Chief Financial Officer who is an Executive Team Member. The Corporate Sustainability Manager coordinates carbon emissions reporting and assurance,and the applications process for registration of projects to earn Australian Carbon Credit Units (ACCUs) under the ERF. This position also advises the Corporate Finance and Treasury functions, who are specifically responsible for the carbon cost management strategy and carbon permit surrender, respectively. During 2017, the Corporate Sustainability Manager reported to the Group Vice President, Investor Relations & Corporate Development. The Group Vice President, Investor Relations and Corporate Development reported to the Chief Financial Officer, thereby providing alignment with the financial performance for the Company and overall risk management.

C11.2

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

Yes

C11.2a

(C11.2a) Provide details of the project-based carbon credits originated or purchased by your organization in the reporting period.

Credit origination or credit purchase

Credit purchase

Project type

Other, please specify (Energy industries (renewable/non-renewab)

Project identification

Beijing Guanting Wind Power Project Phase II and Phase II addition Project type is 'Energy industries (renewable/non-renewable sources)'

Verified to which standard

VCS (Verified Carbon Standard)

Number of credits (metric tonnes CO2e)

73142

Number of credits (metric tonnes CO2e): Risk adjusted volume

Credits cancelled

Yes

Purpose, e.g. compliance

Voluntary Offsetting

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

GHG Scope

Scope 1

Application

Facilities

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

10

Variance of price(s) used

Market (supply and demand)

Type of internal carbon price

Implicit price

Impact & implication

Under the Australian ERF, ACCUs can be earned by facilities through registered energy efficiency projects. Where eligible, the potential value of credits earned is included in CAPEX applications. Credits are owned by the IPL facility/business unit which has conducted the

project which earns them. Credits can be traded on the open market (Australian: price set by supply and demand) or between IPL facilities/business units in the event of a future carbon liability by an IPL facility under the Safeguard Mechanism.

C12. Engagement

C12.1

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

Yes, our suppliers

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

% total procurement spend (direct and indirect)

5

% Scope 3 emissions as reported in C6.5

100

Rationale for the coverage of your engagement

Collection of carbon emission information from our global shipping supplier enabled us to calculate, reduce and offset the GHG emissions associated with our global shipping in 2017.

Impact of engagement, including measures of success

IPL's use of the Greenhouse Gas (GHG) Emissions Rating introduced by RightShip allows us to demonstrate our commitment to seeing GHG emissions reductions in the shipping industry.

Comment

IPL's use of the Greenhouse Gas (GHG) Emissions Rating introduced by RightShip allows us to demonstrate our commitment to seeing GHG emissions reductions in the shipping industry.

Type of engagement
Engagement & incentivization (changing supplier behavior)
Details of engagement
Offer financial incentives for suppliers who reduce your upstream emissions (Scopes 3)
% of suppliers by number
% total procurement spend (direct and indirect)
5
% Scope 3 emissions as reported in C6.5
100
Rationale for the coverage of your engagement
IPL uses the Rightship vessel efficiency ratings system when selecting vessels for our global shipping. The selection of more energy efficient vessels with lower GHG emissions allows us to reduce the potential Scope 3 emissions associated with our shipping. This provides a financial incentive for vessel owners to improve the efficiency of their vessels.
Impact of engagement, including measures of success
A measure of the IPL Scope 3 GHG emissions avoided by using the Rightship vessel efficiency ratings system is not presently available, but is being sought. A measure of the number of ships which have upgraded their efficiency, and therefore their RightShip Greenhouse Gas (GHG) Emissions Rating since the rating began is not presently available, but is being sought.
Comment

Type of engagement
Innovation & collaboration (changing markets)
Details of engagement
Run a campaign to encourage innovation to reduce climate impacts on products and services
% of suppliers by number
% total procurement spend (direct and indirect)
5
% Scope 3 emissions as reported in C6.5
100
Rationale for the coverage of your engagement
Rightship has conducted a media campaign to promote IPL's action across the shipping industry, using interviews with IPL employees in this campaign. IPL also collaborated with our global shipping supplier, RightShip, to voluntarily offset the Scope 3 emissions associated with our shipping, with a Case Study of this action being included in Rightship's media campaign.

Impact of engagement, including measures of success
Number of tonnes of CO2e voluntarily offset by IPL. Number of major shipping magazines who ran the press release (Case Study of the carbon offsetting) as an article.
Comment
To our knowledge, IPL is the first company to voluntarily offset the Scope 3 carbon emissions associated with global shipping.

C12.3

(C12.3) Do you engage in activities that could either directly or indirectly influence public policy on climate-related issues through any of the following?
Trade associations

C12.3b

(C12.3b) Are you on the board of any trade associations or do you provide funding beyond membership?
No

C12.3f

(C12.3f) What processes do you have in place to ensure that all of your direct and indirect activities that influence policy are consistent with your overall climate change strategy?
Our highest governing body is the Board of Directors. The Board is responsible for charting the direction, policies, strategies and financial objectives of the Company. Our sustainability strategy, encompassing our strategy on climate change, was endorsed by the Board. Day-to-day 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 sustainability strategy and governance resides with the Executive Team, advised by the Corporate Sustainability Manager. During the reporting period, the Corporate Sustainability Manager was led by the Vice President, Sustainability who reported to the Chief Financial Officer, thereby providing alignment with the financial performance and financial processes for the Company. 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.

C12.4

(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
Status
Complete
Attach the document
IPL_2017_Annual Report.pdf
Content elements
Risks & opportunities
Emissions figures
Emission targets

Publication
In voluntary sustainability report
Status
Complete
Attach the document
2017 IPL Online Sustainability Report as PDF.pdf
Content elements
Governance
Strategy
Risks & opportunities
Emissions figures
Emission targets

C14. 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.

C14.1

(C14.1) Provide details for the person that has signed off (approved) your CDP climate change response.

	Job title	Corresponding job category
Row 1	Karen Durand Corporate Sustainability Manager	Environment/Sustainability manager

Submit your response

In which language are you submitting your response?

English

Please confirm how your response should be handled by CDP

	Public or Non-Public Submission	I am submitting to
I am submitting my response	Public	Investors

Please confirm below

I have read and accept the applicable Terms