



GRI INDEX & DATA 2019

Incitec Pivot Limited

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INNOVATION
ON THE GROUND



GRI INDEX

This IPL Global Reporting Initiative (GRI) Index and Data document supplements our 2019 Sustainability Report, which has been prepared in accordance with the GRI Standards: Core option. The GRI Index indicates the sections of our 2019 Sustainability Report, 2019 Annual

Report, 2019 Corporate Governance Statement and other public disclosures that specifically address our disclosure against the GRI Standards. Additionally, data which is relevant to these disclosures is also included in this document.

KEY: ● Material topic ● Disclosure required for GRI 'Core' Reporting

Disclosure Number	Disclosure Title	Location of Disclosure / Disclosure	External Assurance
GRI 102: General Disclosures 2016			
● ORGANISATIONAL PROFILE			
102-1	Name of the Organisation	Incitec Pivot Limited, used throughout our reporting.	
102-2	Primary brands, products and services	See Our Businesses	
102-3	Location of head office	Incitec Pivot Limited's head office is located at Level 8, 28 Freshwater Place, Southbank, Victoria, Australia. See also the Contact Us section of our website.	
102-4	Location of operations	2019 IPL Annual Report, p 2-3.	
102-5	Ownership and legal form	Incitec Pivot is an Australian Securities Exchange (ASX) listed company. Shareholder information is available in our 2019 Annual Report, page 105.	
102-6	Our markets	See About Incitec Pivot	
102-7	Scale of the Organisation	Our number of employees, net revenue, tonnes of product supplied and economic value distributed and retained is reported in our 2019 Sustainability Scorecard on page 8. Other data required for this disclosure is reported in the 2019 IPL Annual Report.	
102-8	Information on employees and other workers by location, employment status and gender	2019 Sustainability Report, p 8, 24-25. Page 3 (opposite page) of this document.	
102-9	Description of our supply chain	2019 IPL Sustainability Report, p 34-35. (For risk management strategies associated with gas supply & price risk see 2019 IPL Annual Report, p 28.	
102-10	Significant changes during the reporting period to our organisation and/or our supply chain	2019 IPL Sustainability Report, p 36.	
102-11	Explanation of how IPL addresses the Precautionary Principle	2019 IPL Sustainability Report, p 5.	
102-12	Officially endorsement of any externally developed economic, environmental or social charters, principles or other initiatives.	IPL has not officially endorsed any externally developed economic, environmental or social charters, principles or other initiatives.	
102-13	IPL Membership of Associations	See 'Membership of Associations' on page 13 of this '2019 GRI Index and Data' document.	
● STRATEGY & ANALYSIS			
102-14	Statement from the most senior decision-maker of the organisation	2019 IPL Sustainability Report, p 4.	
● ETHICS & INTEGRITY			
102-16	Values, principles, standards and norms of behaviour such as codes of conduct and codes of ethics	2019 IPL Sustainability Report, p 10-11.	
102-17	Mechanisms for advice and concerns about ethics	2019 IPL Sustainability Report, p 11.	
● GOVERNANCE			
102-18	Governance structure of the organisation, including committees of the highest governance body	2019 IPL Corporate Governance Statement.	

Relevant Data

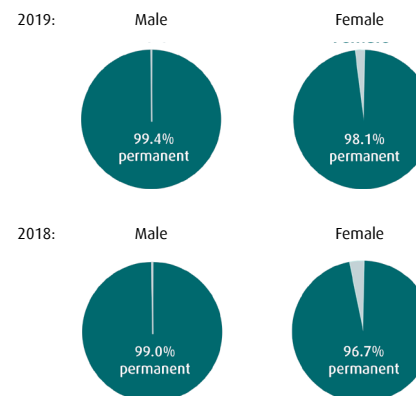
GRI 102-8: INFORMATION ON EMPLOYEES & OTHER WORKERS BY LOCATION, EMPLOYMENT STATUS & GENDER

Workforce by Location (excluding contractors)	2017	2018	2019
Total Global Workforce	4,570	4,766	4,820
Americas	2,328	2,452	2,527
Asia Pacific	1,971	2,050	2,067
Europe	271	264	226

GRI 102-41: PERCENTAGE OF TOTAL EMPLOYEES COVERED BY COLLECTIVE BARGAINING AGREEMENTS

Collective Bargaining Agreements	2017	2018	2019
% Total Workforce Covered by Collective Bargaining Agreements	21.1%	25.4%	24.1%

Total workforce by employment status and gender (permanent versus temporary, excluding contractors)



IPL's data systems do not currently allow for the reporting and breakdown of all supervised workers. IPL's data systems do not currently allow for accurate breakdowns of contractors by contractor types. Workers who are legally recognised as self employed do not perform a substantial proportion of IPL's work. Individuals other than employees or supervised workers, including employees and supervised workers of contractors, do not perform a substantial proportion of IPL's work.

Workforce by Gender (% female)	2017	2018	2019
Total Workforce	15.8%	15.9%	17.2%
Board ¹	25%	42.9%	50.0%
Executive Team	33.3%	22.0%	30.0%
Senior Management ²	18.8%	16.7%	22.0%
Professional/Management	11.3%	18.9%	19.5%

1. The IPL Managing Director and CEO is classified as a Board Member.
2. Defined as roles which are 1-2 levels below the Executive Team.

GRI INDEX (CONTINUED)

KEY: ● Material topic ● Disclosure required for GRI 'Core' Reporting

Disclosure Number	Disclosure Title	Location of Disclosure / Disclosure	External Assurance
GRI 102: General Disclosures 2016			
● STAKEHOLDER ENGAGEMENT			
102-40	List of stakeholder groups	Page 5 of this document (opposite page).	
102-41	Percentage of total employees covered by collective bargaining agreements	Page 3 of this document.	
102-42	Basis for stakeholder identification and selection	2019 IPL Sustainability Report, p 5 under 'Our Approach' and 'Materiality Assessment'.	
102-43	Our approach to stakeholder engagement	2019 IPL Annual Report, p 5. Page 5 of this document (opposite page).	
102-44	Key topics and concerns raised by our stakeholders	Page 5 of this document (opposite page).	
● REPORTING PRACTICE			
102-45	Entities included in IPL's financial reporting	2019 IPL Annual Report, p 84-85. All subsidiaries have been included in our Sustainability Reporting as they are controlled by the Group.	
102-46	Defining report content and topic boundaries	2019 IPL Sustainability Report, p 5 and 'Material Topics and Topic Boundaries' on page 7 of this document	
102-47	List of material topics	2019 IPL Sustainability Report, p 5 and 'Material Topics and Topic Boundaries' on page 7 of this document	
102-48	Restatements of information	2019 IPL Sustainability Report, p 36.	
102-49	Changes in reporting	2019 IPL Sustainability Report, p 36.	
102-50	Reporting period	2019 IPL Sustainability Report, p 5 & 36.	
102-51	Date of most recent report	2019 IPL Sustainability Report, p 3.	
102-52	Reporting cycle	2019 IPL Sustainability Report, p 3.	
102-53	Contact point for questions regarding the report	2019 IPL Sustainability Report, p 3.	
102-54	Claims of reporting in accordance with GRI Standards	2019 IPL Sustainability Report, p 3.	
102-55	GRI Content Index	This table	
102-56	External Assurance	2019 IPL Sustainability Report, p 36 and column 4 of this table.	
GRI 200: Economic Standards 2016			
● GRI 200: ECONOMIC PERFORMANCE			
103-1	Explanation of the materiality of our Economic Performance and its boundary	2019 IPL Annual Report See also 'Material Topics and Topic Boundaries', p 7 of this '2019 GRI Index and Data' document.	
103-2	Management approach and its components	2019 IPL Annual Report 2019 IPL Corporate Governance Statement	
103-3	Evaluation of the management approach	2019 IPL Annual Report	
201-1	Direct economic value generated and distributed	For direct economic value generated & distributed see 'Scorecard', 2019 IPL Sustainability Report, p 4. For external assurance statement see the 2019 IPL Annual Report, page 100.	Yes
201-2	Financial implications and other risks and opportunities for the organisation's activities due to climate change	Pages 14-17 of this '2019 GRI Index & Data' document. 2019 IPL Sustainability Report, p 20-21 2019 IPL Annual Report, p 30-32 2019 IPL CDP Report.	

Our Stakeholders and Engagement Strategies

Stakeholder Group	Stakeholders	Concerns and Interests	Engagement Strategies
Employees & contractors	Our employees and contractors include a wide range of language speakers and cultural groups	Health, safety and working conditions; economic performance of IPL; ethical, environmental and social performance of IPL; career and development opportunities; remuneration; performance management; senior leadership/corporate strategy	Direct engagement at IPL sites, including leadership as coaching; direct participation and/or representation on site based Zero Harm Committees; real time 'Safety Alerts' via internal email; 'The Hub' intranet communications, including a range of newsletters, external HSE Alerts and links for employee feedback; interactive/collaborative annual employee performance management process; Indigenous Engagement Strategy (Australia); internal workshops and conferences; global 'Your Voice' Company wide employee surveys in 2018 and 2019; the 'Engaging Leaders', 'Diverse and Inclusive' and 'Collaboration' themes in our 'Talented and Engaged People' strategic driver, supported by programs such as 'Leader as Coach' and 'Better Conversations Everyday'.
Customers - mining	Large companies and distributors in the mining, quarrying, seismic and construction industries	Cost; reliability of supply; product quality; access to specialist advice; technical innovation; workforce diversity at IPL; sustainable performance of IPL and its products in relation to safety & environmental impacts	Direct engagement at customer sites; collaborative problem solving to meet customer needs; participation in EcoVadis customer sustainability questionnaires; customer technical workshops; dedicated Customer Relationship Managers; collaborative product research and development
Customers - fertilisers	Business partners, & agents who distribute IPL's bulk & packaged fertiliser products; agronomists; farmers who receive our products directly & through agents	Cost; efficiency/yield improvement; access to agronomy expertise and customer soils/plant testing; social licence to operate; sustainable performance of IPL products in relation to environmental impacts, including leaching and climate change	Direct engagement with customers; engagement during collaborative tailoring of product use through Nutrient Advantage laboratory soil and plant testing; Nutrient Advantage interactive software and app; monitoring of customer satisfaction through Net Promoter Score software and Fertshead, IPL's online customer transactional portal; collaborative product research and development; online 'Agronomy Community' engagement; in person Agronomy Community Forums; formal complaint/product feedback process
Suppliers & business partners	From local businesses to large international organisations and joint venture partners	Supply agreements; reliable payment processes; health and safety performance; IPL's social, environmental and governance performance	Direct engagement; supplier questionnaires; supplier audits; supplier meetings; supplier Performance Scorecards; conditions of contracts; regular meetings with joint venture partners
Shareholders & the investment community	Retail, institutional and individual shareholders	Economic performance of IPL; governance; investor sustainability ratings (CDP, DJSI, FTSE4Good); management of water (Australia); raw materials sourcing; management of climate change related issues	ASX announcements, Annual General Meeting; Sustainability Investor Briefings; half-year and end-of-year results presentations and webcasts; direct shareholder engagement including calls and meetings, with feedback to the Board where appropriate; shareholders may also write to the Chairman of the Board
Community & local residents	Individuals and groups local to our operations	Employment opportunities; business development; sponsorship and donations; local operational impacts; company environmental compliance; cultural heritage; transparency; managing climate change	Site-specific programs for community contact, information sharing and community investment; employment opportunities via the IPL and Dyno Nobel websites; direct engagement with individuals; systems to register, investigate and promptly respond to community complaints; transparent reporting
Research partners	University & Government research institutions, as well as customers (addressed above)	Mining safety; reducing NOx emissions; reducing GHG emissions; sustainable food production; sustainable soils management; enhanced efficiency fertilisers for sustainable food security; climate change	Direct engagement in collaborative research projects.
Government	Local, state & national regulators & government agencies	Regulatory compliance; energy policy; climate change policy; research & development; local community issues	Direct engagement with government and regulatory agencies in the countries in which we operate; written submissions regarding regulatory impact either directly or via professional groups or industry associations

GRI INDEX (CONTINUED)

KEY: ● Material topic ● Disclosure required for GRI 'Core' Reporting

Disclosure Number	Disclosure Title	Location of Disclosure / Disclosure	External Assurance
GRI 200: Economic Standards 2016 (Continued)			
● GRI 205: ANTI-CORRUPTION			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 10-11. See also 'Material Topics and Topic Boundaries', p 7 of this document (opposite page).	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 10-11. 2019 IPL Corporate Governance Statement	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 10-11. 2019 IPL Corporate Governance Statement	
205-3	Incidents of corruption during the reporting period	There were no confirmed incidents in which employees were dismissed or disciplined for corruption in 2019. There were no fines, penalties or settlements in relation to corruption in 2019.	
GRI 300: Environmental Standards 2016			
GRI 301: MATERIALS 2016			
301-3	Although not required for core disclosure, reclaimed packaging materials are reported.	2019 Sustainability Report, p 33-31	
● GRI 302: ENERGY 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 16. See also 'Material Topics and Topic Boundaries', p 7 of this document (opposite page).	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 17.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 17.	
302-1	Energy consumption within the organisation	2019 IPL Sustainability Report, p 16.	
● GRI 303: WATER AND EFFLUENTS 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 18-19. See also 'Material Topics and Topic Boundaries', p 7 of this document (opposite page).	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 18-19.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 18-19.	
303-1	Total water withdrawal by source	2019 IPL Sustainability Report, p 18.	
303-3	Percentage & total volume of water recycled & reused	2019 IPL Sustainability Report, p 18.	
● GRI 305: EMISSIONS 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 16-17. See also 'Material Topics and Topic Boundaries', p 7 of this document (opposite page).	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 16-17.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 16-17.	
305-1	Direct greenhouse gas (GHG) emissions (Scope 1)	2019 IPL Sustainability Report, p 16.	Yes
305-2	Indirect greenhouse gas (GHG) emissions (Scope 2)	2019 IPL Sustainability Report, p 16.	Yes
305-7	Disclosure is not required for 'core' reporting, however information relating to our NOx and SOx emissions is reported.	2019 IPL Sustainability Report, p 17.	

Material Topics and Topic Boundaries

For the purposes of applying the GRI Standards guidelines, the material issues identified by IPL have been mapped back to the 'Topics' identified in the guidelines. The following table outlines these aspects, as well as whether the primary boundary for each topic falls within and/or outside the organisation. All topics have the potential to affect stakeholders outside the organisation secondarily.

Material Topics	GRI Standards	Related GRI Disclosures	Topic Boundaries
Economic Performance	GRI 200: Economic Performance 2016	201-1: Economic Performance	Within IPL Outside of IPL - our shareholders and our employee communities
Workplace Health & Safety	Outside of IPL - our shareholders and investors	403: Occupational Health & Safety	Within IPL - our employees and contractors Outside of IPL - customers and community members who come into contact with our employees who operate under our health and safety policies as they travel outside of our sites
Ethical Conduct	GRI 102: General Disclosures 2016	102-16: Ethics and Integrity	Within IPL - our employees and contractors Outside IPL - stakeholders we deal with
Climate Change	GRI 200: Economic Performance 2016	201-2 Climate Change	Within IPL Outside of IPL - our shareholders and investors
Managing Environmental Impacts	GRI 300: Environmental Standards 2016	307: Environmental Compliance	Within IPL - Our on-site environments Outside IPL - local environments close to our operations, and potentially, the broader environment
Resource Efficiency & Emissions	GRI 300: Environmental Standards 2016	302: Energy 305: Emissions 303: Water	Within IPL Outside IPL - customers, communities and the environment within the countries in which we operate, and globally with respect to climate change Within IPL Outside IPL - customers, communities and the environment within the countries in which we operate, and globally with respect to climate change Within IPL - Use of the WRI Aqueduct Water Tool has identified several Australian IPL facilities and one in the south west of the United States as operating in areas where water is a material issue. These are Gibson Island, Phosphate Hill, Mt Isa and Geelong in Australia, and Cheyenne, Wyoming in the USA. Outside of IPL - the relevant local communities, other local water users and relevant water management and regulatory bodies
Sustainability of Products & Services, including and Innovation & Technology	-	-	Outside of IPL - the environmental performance of our customers and the impacts on their environments globally
Customer Safety	GRI 400: Social Standards 2016	417: Product and Service Labelling	Within IPL - our employees Outside IPL - our customers, and our external product transporters and handlers globally
Diversity & Equal Opportunity	GRI 400: Social Standards 2016	405: Diversity & Equal Opportunity	Within IPL - our employees and contractors
Employee Engagement	GRI 400: Social Standards 2016	-	Within IPL - our employees and contractors
Community Relations	GRI 400: Social Standards 2016	413: Local Communities	Within IPL Outside of IPL - the local communities in which we operate
Customer Relationships	-	-	Within IPL Outside IPL - our customers globally
Product Quality	-	-	Outside IPL - our customers globally

GRI INDEX (CONTINUED)

KEY: ● Material topic ● Disclosure required for GRI 'Core' Reporting

Disclosure Number	Disclosure Title	Location of Disclosure / Disclosure	External Assurance
GRI 300: Environmental Standards 2016 (Continued)			
GRI 306: EFFLUENTS AND WASTE			
103-2	Disclosure is not required for 'core' reporting, however information on our management approach is reported.	2019 IPL Sustainability Report, p 19.	
306-1	Disclosure is not required for 'core' reporting, however total water discharge by destination is reported.	2019 IPL Sustainability Report, p 19.	
306-2	Disclosure is not required for 'core' reporting, however waste by type and disposal method is reported.	2019 IPL Sustainability Report, p 19.	
● GRI 307: ENVIRONMENTAL COMPLIANCE 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 15. See also p 7 of this '2019 GRI Index & Data' document.	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 15.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 15.	
307-1	The monetary value of significant fines and total number of non-monetary sanctions for non-compliance with environmental laws and regulations	2019 IPL Sustainability Report, p 15.	
GRI 308: SUPPLIER ENVIRONMENTAL ASSESSMENT 2016			
103-2	Disclosure is not required for 'core' reporting, however information on our management approach to Supplier Environmental Assessment is reported.	2019 IPL Sustainability Report, p 30.	
308-1	Disclosure is not required for 'core' reporting, however information relating to the percentage of new suppliers screened using environmental criteria is reported.	2019 IPL Sustainability Report, p 30.	
GRI 400: Social Standards 2016			
● GRI 401: EMPLOYMENT 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 32-33. See also p 7 of this '2019 GRI Index and Data' document.	
103-2	Management approach and its components, including grievance mechanisms relating to labour practices	2019 IPL Sustainability Report, p 32-33. For grievance mechanisms, see the 2019 Sustainability Report, p.11, 'IPL Whistle Blower Protection.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 32-33.	
401-1	New employee hires and employee turnover rates	Page 9 of this document (opposite page)	
● GRI 403: OCCUPATIONAL HEALTH AND SAFETY 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 12-14. See also p 7 of this '2019 GRI Index and Data' document.	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 12-14.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 12-14.	
305-1	% total workforce represented in formal joint 'management-worker' health & safety committees that help monitor & advise on OH&S safety programs	2019 IPL Sustainability Report, p 12. 100% of our total workforce is represented in formal joint 'management-worker' committees that help monitor & advise on OH&S safety programs.	
305-2	TRIFR by region, by gender, and by employee and contractor categories.	2019 IPL Sustainability Report, p 15.	
305-7	Disclosure is not required for 'core' reporting, however information on our NOx and SOx emissions is reported.	2019 IPL Sustainability Report, p 17.	

Relevant Data

401-1: NEW EMPLOYEE HIRES AND EMPLOYEE TURNOVER RATES BY AGE GROUP, GENDER & REGION

Rate of New Employee Hires	2017	2018	2019
Total Workforce	14.8%	16.3%	15.8%
% Rate of New Hires by Age Group			
Employees under 30		32.3%	39.1%
Employees 30-50		15.8%	15.1%
Employees 50+		8.8%	7.0%
% Rate of New Hires by Gender			
Males		14.8%	14.3%
Female		21.9%	23.2%
% Rate of New Hires by Region			
Americas		16.3%	16.3%
Asia Pacific		16.0%	15.0%
Europe		11.8%	18.0%

The terms '2017', '2018' and '2019' refer to the IPL financial year ending September 30 in each year. Data excludes Mexico.

% Rate of New Hires for 2019 has been calculated by dividing the total number of new hires in each category by the total average headcount for 2018 and 2019 for each category (excluding Mexico) as at Sept 30 each year. Previous years have been calculated using the same methodology.

Voluntary Turnover Rates	2017	2018	2019
Total Workforce	8.4%	9.4%	8.6%
% Voluntary Turnover Rates by Age Group			
Employees under 30	9.4%	12.1%	11.0%
Employees 30-50	7.4%	7.8%	8.4%
Employees 50+	7.4%	8.3%	7.8%
% Voluntary Turnover Rates by Gender			
Males	8.0%	8.9%	9.0%
Female	10.6%	11.7%	10.9%
% Voluntary Turnover Rates by Region			
Americas	10.9%	9.9%	9.4%
Asia Pacific	7.3%	10.3%	9.9%
Europe	7.9%	10.9%	15.5%

The terms '2017', '2018' and '2019' refer to the IPL financial year ending September 30 in each year. Data excludes Mexico.

% Voluntary Turnover for 2019 has been calculated by dividing the total resignations for each category by the total average headcount for 2018 and 2019 for each category (excluding Mexico) as at Sept 30 each year. Previous years have been calculated using the same methodology.

Involuntary Turnover Rates	2017	2018	2019
Total Workforce	5.8%	4.4%	5.9%
% Involuntary Turnover Rates by Age Group			
Employees under 30	5.7%	7.3%	9.9%
Employees 30-50	4.9%	3.3%	5.9%
Employees 50+	5.6%	4.0%	4.0%
% Involuntary Turnover Rates by Gender			
Males	5.7%	4.5%	6.7%
Female	6.1%	4.1%	4.7%
% Involuntary Turnover Rates by Region			
Americas	4.2%	5.1%	5.7%
Asia Pacific	8.0%	3.7%	6.4%
Europe	9.1%	10.5%	19.2%

The terms '2017', '2018' and '2019' refer to the IPL financial year ending September 30 in each year. Data excludes Mexico.

% Involuntary Turnover rates for 2019 have been calculated by dividing the total terminations for each category by the total average headcount for 2018 and 2019 for each category (excluding Mexico) as at Sept 30 each year. Previous years have been calculated using the same methodology.

GRI INDEX (CONTINUED)

KEY: ● Material topic ● Disclosure required for GRI 'Core' Reporting

Disclosure Number	Disclosure Title	Location of Disclosure / Disclosure	External Assurance
GRI 400: Social Standards 2016 (Continued)			
GRI 404: EDUCATION AND TRAINING			
103-2	Disclosure is not required for 'core' reporting, however information on our management approach is reported.	2019 IPL Sustainability Report, p 33 under Talented People: 'Actions in 2019'.	
404-1	Disclosure is not required for 'core' reporting, however, the percentage of employees receiving regular performance and career development reviews by gender and by employee level is reported.	Page 11 (opposite page) of this document: performance & career development reviews have increased since 2017 as part of our our strategic Talent Management System.	
● GRI 405: DIVERSITY AND EQUAL OPPORTUNITY 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 32-33. 2019 IPL Corporate Governance Statement, p 2-4. See also 'Material Topics and Topic Boundaries', p 7 of this '2019 GRI Index and Data' document.	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 32-33. 2019 IPL Corporate Governance Statement, p 2-4.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 32-33. 2019 IPL Corporate Governance Statement, p 2-4.	
405-1	Diversity of governance bodies and employees according to gender, age group and minority groups	Page 11 of this document (opposite page). 2019 IPL Corporate Governance Statement, p 2-4. 2019 IPL Sustainability Report, p 32-33.	
405-2	Disclosure is not required for 'core' reporting, however information on our management approach to equal remuneration for women and men is reported.	2019 IPL Sustainability Report, p 32-33. 2019 IPL Corporate Governance Statement, p 2-4. Page 11 of this document (opposite page).	
● GRI 413: LOCAL COMMUNITIES 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 34-35. See also 'Material Topics and Topic Boundaries', p 7 of this '2019 GRI Index and Data' document.	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 34-35.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 34-35.	
413-2	Operations with significant actual and potential negative impacts on local communities	2019 IPL Sustainability Report, p 34-35. 2019 IPL Annual Report, p 16.	
HUMAN RIGHTS GRIEVANCE MECHANISMS (GRI 103: 2016)			
103-2	Disclosure is not required for 'core' reporting, however information on our management approach is reported.	2019 IPL Sustainability Report, p 11 under 'Whistleblower Protection'. See also the IPL Human Rights Policy and IPL Modern Slavery Policy.	
GRIEVANCE MECHANISMS FOR IMPACTS ON SOCIETY (GRI 103: 2016)			
103-2	Disclosure is not required for 'core' reporting, however information on our management approach is reported.	2019 IPL Sustainability Report, p 11 under 'Whistleblower Protection' and page 34 under 'Community Safety'.	
GRI 414: SUPPLIER SOCIAL ASSESSMENT 2016			
103-2	Disclosure is not required for 'core' reporting, however information on our management approach is reported.	2019 IPL Sustainability Report, p 30.	
414-1	Disclosure is not required for 'core' reporting, however, information relating to the percentage of new suppliers that were screened using human rights criteria is available reported.	2019 IPL Sustainability Report, p 30.	

Relevant Data

306-1: PERCENTAGE OF EMPLOYEES RECEIVING REGULAR PERFORMANCE & CAREER DEVELOPMENT REVIEWS BY GENDER & BY EMPLOYEE LEVEL

Performance reviews by gender	2017	2018	2019
% Employees Receiving Performance Reviews			
Total Workforce	59.0%	81.0%	80.2%
Total male employees	56.2%	79.3%	77.2%
Total Female employees	74.0%	90.2%	94.8%
% Board Receiving Performance Reviews			
Male	100.0%	100.0%	100.0%
Female	100.0%	100.0%	100.0%
% Executive Team Receiving Performance Reviews			
Male	100.0%	100.0%	100.0%
Female	100.0%	100.0%	100.0%
% Management Receiving Performance Reviews			
Male*		100.0%	100.0%
Female*		100.0%	100.0%
% Non-management Receiving Performance Reviews			
Male*		78.1%	75.8%
Female*		89.8%	95.4%

Performance reviews by status	2017	2018	2019
% Full time & Part time Employees Receiving Performance Reviews			
Total Workforce	59.0%	81.0%	80.2%
Full time employees*		81.2%	80.0%
Part time employees*		67.9%	93.2%

* Metric not calculated before 2018

Percentages in the tables above were calculated by dividing the number of employees in each category who received an annual performance review by the total number of employees in that category.

405:2 EQUAL REMUNERATION FOR WOMEN & MEN

Salary Equity (male:female)	2017	2018	2019
Executive Team Level	1 : 0.85	1 : 1.03	1 : 0.57
Management Level	1 : 0.96	1 : 0.97	1 : 0.95
All other levels	1 : 0.99	1 : 1	1 : 0.98

All salaries converted to AUD at spot rate (at 30 Sept 2017). It is important to note that because salary levels and gender percentages differ significantly in different regions, this may skew average salary ratios by level.

405-1: DIVERSITY OF GOVERNANCE BODIES & EMPLOYEES ACCORDING TO GENDER, AGE GROUP & MINORITY GROUPS

Workforce Diversity	2017	2018	2019
Gender Diversity (% female)			
Board ¹	25%	42.9%	50.0%
Executive Team	33.3%	22.0%	30.0%
Senior Management ²	18.8%	16.7%	22.0%
Professional/Management Global	11.3%	18.9%	19.5%
	15.8%	15.9%	17.2%
Indigenous Australians³ (% Australian workforce)			
	2.3%	2.6%	3.0%
Age Diversity: Total Workforce			
% employees under 30	14.2%	13.4%	13.9%
% employees 30-50	54.3%	55.0%	53.8%
% employees 50+	31.4%	31.6%	32.3%
Age Diversity: Board*			
% employees under 30		0.0%	0.0%
% employees 30-50		0.0%	0.0%
% employees 50+		100%	100%
Age Diversity: Executive Team*			
% employees under 30		0.0%	0.0%
% employees 30-50		66.7%	50.0%
% employees 50+		33.3%	50.0%
Age Diversity: Management*			
% employees under 30		0.0%	0.4%
% employees 30-50		57.8%	58.4%
% employees 50+		42.2%	41.3%
Age Diversity: Non-management*			
% employees under 30		14.3%	14.8%
% employees 30-50		54.8%	53.6%
% employees 50+		30.9%	31.7%

8 employees did not disclose their age

* Metric not calculated before 2018

1. The IPL Managing Director and CEO is classified as a Board Member.
2. Defined as roles which are 1-2 levels below the Executive Team.
3. IPL does not currently ask employees who identify with particular minority groups within their countries to identify themselves. Due to our commitment to Indigenous employment in Australia, Dyno Nobel Asia Pacific employees may choose to identify themselves as Australian Indigenous or Torres Strait Islander persons.

Disclosure Number	Disclosure Title	Location of Disclosure / Disclosure	External Assurance
GRI 400: Social Standards 2016 (Continued)			
GRI 415: PUBLIC POLICY 2016			
415-1	Disclosure is not required for 'core' reporting, however the total monetary value of financial and in-kind political contributions made directly and indirectly is reported.	The total monetary value of financial and in-kind political contributions made directly and indirectly by IPL in 2019 is zero. The IPL Political Engagement and Donations Policy, which was amended by the Board on 17 December 2015, prohibits the Group from making any political donations, whether in cash or in kind, to: - any political party or organisation, party official; - individual politicians; - any political candidate for public office; or - any third party organisation that may make political donations (collectively referred to in the policy as 'political persons') in any country.	
● GRI 417: MARKETING AND LABELLING 2016			
103-1	Explanation of the material topic and its boundary	2019 IPL Sustainability Report, p 24 under 'Customer Health and Safety'. 2019 IPL Sustainability Report, p 28 under 'Customer Health and Safety'. See also 'Material Topics and Topic Boundaries', p 7 of this '2019 GRI Index and Data' document.	
103-2	Management approach and its components	2019 IPL Sustainability Report, p 24 under 'Customer Health and Safety'. 2019 IPL Sustainability Report, p 28 under 'Customer Health and Safety'.	
103-3	Evaluation of the management approach	2019 IPL Sustainability Report, p 24 under 'Customer Health and Safety'. 2019 IPL Sustainability Report, p 28 under 'Customer Health and Safety'.	
417-1	Information relating to the type of product and service information required by the organisation's procedures for product and service information and labelling, and percentage of significant product and service categories subject to such information requirements.	2019 IPL Sustainability Report, p 24 under 'Customer Health and Safety'. 2019 IPL Sustainability Report, p 28 under 'Customer Health and Safety'.	

Membership of Associations in the reporting period

Industry Association	Description
Fertilizer Australia	The industry association representing manufacturers, importers and distributors of fertiliser in Australia, and associated service industries. Fertiliser Australia members supply over 95% of the fertilisers used in Australia. IPL holds a board position.
International Fertilizer Industry Association	A not-for-profit organisation that represents the global fertiliser industry. IFA member companies represent all activities related to the production, trade, transport and distribution of the nutrients required to help farmers worldwide address the growing need for food, feed, fibre and bio energy. IPL holds a board position.
The Fertilizer Institute	The trade association representing the public policy, communication & statistical needs of producers, manufacturers, retailers & transporters of fertilizer in the US. Issues of interest include security, international trade, energy, transportation, the environment, worker health and safety, farm bill & conservation programs to promote the use of enhanced efficiency fertilizer. Dyno Nobel Americas is a member.
Australian Explosives Industry and Safety Group	AEISG aims to continuously improve the level of safety in the manufacture, transport, storage, handling and use of precursors and explosives in commercial blasting throughout Australia. Dyno Nobel is a member.
Minerals Council of Australia	Represents Australia's exploration, mining, and minerals processing industry, nationally and internationally, in its contribution to sustainable development and society. MCA member companies produce more than 85% of Australia's annual mineral output. Dyno Nobel is a member.
National Mining Association	The voice of the American mining industry in Washington, D.C., NMA is the only national trade organisation that represents the interests of mining before Congress, the Administration, federal agencies, the judiciary and the media. Dyno Nobel is a member.
Queensland Resources Council (QRC)	An independent not-for-profit peak industry association representing the commercial developers of Queensland's mineral and energy resources. The QRC works to secure an environment conducive to the long-term sustainability of the minerals and energy sectors in Queensland, Australia. Dyno Nobel is a member.
Institute of Makers of Explosives	An association concerned with the safety and security of the commercial explosives industry in the United States and Canada. Dyno Nobel is a member.
International Society of Explosives Engineers	A professional society dedicated to promoting the safety, security and controlled use of explosives. Dyno Nobel is a member.
Global Explosives Safety Group (SAFEX)	A non-profit organisation of manufacturers of explosives and pyrotechnics which aims to protect people and property against dangers and damage by the sharing of experience in the explosives industry. Dyno Nobel is a member.
Canadian Explosives Industry Association	CEAEC is an industry association concerned with the promotion of high standards in the manufacturing, use, transportation and handling of explosives in the interest of worker and public safety. Dyno Nobel is a member.
Ammonium Nitrate Nitric Acid Producers Group	ANNA is an informal international organisation of manufacturers of ammonium nitrate and nitric acid with the goal of promoting networking within the industry through sharing knowledge, technology and experience. Dyno Nobel is a member.
The National Sand, Stone and Gravel Association	An association for the aggregates industry in the US, concerned with supporting policies and regulation that promote the safe and environmentally responsible use of aggregates. Dyno Nobel is a member.
Business Council of Australia	Provides a forum for Australian business leaders to contribute directly to public policy debates. Members determine the work program and policy positions of the Council through their participation in policy committees, special-issue task forces and the BCA Board.
Manufacturing Australia (MA)	A CEO-led coalition of some of Australia's largest manufacturers that work with governments, businesses and communities to promote Australia's manufacturing sector to make a significant and sustainable contribution to the nation's economy.
Australian Industry Greenhouse Network	A network of industry associations and individual businesses which contribute to the climate change policy debate and see value in joint industry action on climate change in order to promote sustainable industry development. The network is committed to industry collaboration on equitable global action to reduce greenhouse gas emissions.
Carbon Market Institute	CMI is the independent peak industry body at the centre of business and climate action in Australia, seeking to: share knowledge, build capacity and catalyse opportunities for businesses leading the transition to a net-zero emissions economy; steward Australia's carbon markets and related policies; and champion the UNFCCC Paris Agreement and TCFD's framework of climate and net-zero emission goals.
Energy Users Association of Australia	The Energy Users Association of Australia plays a critical role in helping companies navigate uncertainty in energy markets and participate in driving changes in market rules and the way the network is managed, to ensure better outcomes and reduced costs for energy users. It seeks a competitive, reliable and sustainable energy supply for all users.
American Chamber of Commerce in Australia (AmCham)	AmCham gives members exclusive access to thought leadership, communities of interest, policy advice, business advocacy, information, and relationships with business and government. With roots in America, AMCham serves the business community across Australia and the entire Asia-Pacific, providing assistance to companies in the USA & Australia and promoting trade, commerce and investment to and from Australia.
American Australian Business Council (AABC)	The dynamic economic bond between Australia and the United States is at the core of the relationship between the two nations. It is a bond founded on a commitment to commerce through the flow of capital, people and ideas. The AABC was formed to tell this story and help to further strengthen this bond. By highlighting the businesses and their leaders who are key to this relationship, the AABC serves as a resource for business on both sides of the Pacific.
Chief Executive Women (CEW)	Chief Executive Women represents more than 500 of Australia's most senior and distinguished women leaders, whose shared vision is Women Leaders Enabling Women Leaders. CEW strives to educate and influence all levels of Australian business and government on the importance of gender balance. Through advocacy, targeted programs and scholarships, CEW works to remove the barriers to women's progression and ensure equal opportunity for prosperity.
National Association of Women in Operations (NAWO)	The peak Australian body championing women in operations and is an incorporated not-for-profit association lead by an unpaid Board of dedicated senior professionals. NAWO aims to: inspire and support women to reach their full potential and achieve their career goals; and to inspire and support organisations to create inclusive workplaces, and attract & retain the best talent to reach their chosen objectives.
Resource Industry Network	A peak industry association representing companies actively engaged in the resource sector and those who are allied to the sector. The association seeks to facilitate effective member-to-member connections, assist in developing regional capability e.g. education and innovation, and promote the innovation and capability of members and industry, as well as promoting members to the commercial decision makers, peak bodies and government representatives in the resource sector. Dyno Nobel is a member.

Risks & Opportunities Associated with Climate Change

During 2018, IPL strengthened its integrated risk assessment process with the engagement of an expert third party to conduct a comprehensive assessment of IPL's physical and transitional (market-based) risks and opportunities associated with climate change. This assessment was conducted using two future climate related scenarios created specifically for IPL: a two-degree scenario (2D) and a four-degree scenario (4D).

Since this assessment of risks and opportunities will be completed every three years, as noted in the Charter of the IPL Audit and Risk Management Committee, this 2018 risk assessment is the most current.

The Climate Change Scenario Methodology and descriptions of the 2 and 4 Degree Scenarios used is reported in our 2018 Sustainability report which can be downloaded on our website.

RISKS

Policy and Legal Risks

IPL has manufacturing facilities across various geographical locations that may be impacted by regulatory changes aimed at reducing the impact of, or otherwise addressing, climate change. Any changed regulation could result in an increase to the cost base or operating cost of these plants, and it may not be possible to alter sales prices to offset these cost increases. This includes, but is not restricted to, any regulations relating to reducing carbon emissions. Alternatively, any such regulatory changes may potentially impact the ability of these plants to continue functioning as currently operated. This risk would be heightened if regulatory changes are implemented inconsistently across regions or countries so that IPL's facilities (principally located in Australia and North America) are impacted by regulatory changes while manufacturing facilities of competitors operating in other jurisdictions are less impacted.

Carbon pricing currently applies in Australia, and under the 2D scenario, rapid action to limit climate change would include a global carbon price by 2020 (short-term risk: 1-3 years). Carbon pricing would increase operational costs as well as costs to transport products, which could impact until 2025, when most shipping options would be retrofitted with zero or low carbon mobility options (e.g. hydrogen). The transition to a global carbon price may give rise to a period of volatility where IPL would not be able to pass through the immediate carbon costs to customers, who may choose to source products more locally where available to avoid these carbon costs.

Market Changes

Under the 2D scenario, transitioning away from fossil fuels is likely to significantly decrease demand for thermal coal, with impacts beginning in the short term (1-3 years). However, the technologies associated with renewable energy such as electric vehicles and largescale batteries are likely to expand dramatically, with World Bank estimates indicating that demand for the metals required for these technologies could grow by 1000% under a 2-degree scenario. While these mining operations (which use explosives) mitigate the loss of revenue from the thermal coal market, 'new world commodities' do not require the same quantity of explosives as bulk commodities, which may result in lower overall demand and potentially lead to a supply/demand imbalance.

In the 2D scenario, recycling trends are expected to lower the need for primary metals, especially in the steel (iron ore and metallurgical coal) supply chains. Scrap steel may be utilised in electric arc furnaces and this would reduce the demand for virgin iron ore and

The table below refers to the risks and opportunities for IPL as described by the 2D and 4D scenarios. Therefore, the descriptions of risks, opportunities and resilience are not forecasts, but describe what could happen if the world's development progressed as described in either the 2D or 4D scenario.

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

Mitigation and Resilience

IPL has a large, diverse supplier group, which would assist in avoiding carbon pricing pass through in the short-term. Our customer agreements provide for the pass through of carbon pricing where possible and domestic co-location of critical products will reduce carbon costs associated with transport.

Diversification away from single source suppliers, already being managed, will also assist in managing the potentially volatile/variable costs associated with increased regulation, including carbon pricing, in the period between 2030 and 2040.

Carbon pricing and other policy support for transitioning to the low carbon future described in the 2D scenario may create opportunities for IPL related to funding for investment in new technologies which reduce GHG emissions. IPL is closely monitoring both policy developments and the development of new technologies and has successfully registered one project to earn Australian Carbon Credit Units (ACCUs) under the current Australian Federal Government Emissions Reduction Fund. IPL's strategic focus on Leading Technology Solutions and Customer Focus as two of our six value drivers also positions us to leverage our premium technology platform throughout all our geographies and sectors, and we continue to develop and provide products and services which reduce our customers' energy use and GHG emissions. See pages 20-21 and 22-29 in our 2019 Sustainability Report for more detail.

Mitigation and Resilience

We monitor the global environment, conduct detailed assessments of our markets and regularly update our supply and demand forecasts so that we can quickly respond to change. We seek to maintain competitive cost positions in our chosen markets, whilst maintaining quality product and service offerings. This focus on cost and quality positions our business units to compete over the medium to longer term in changing and competitive environments and we prefer to engage in long term customer and supply contractual relationships.

In the 2D scenario the reduction in demand for explosives supplying the thermal coal markets will be partly offset by the mining of new world commodities required for renewable technologies, which could be higher margin activity. In the 4D scenario, the physical impacts of climate change are expected to increase demand for materials, and therefore explosives, in the quarry and construction sector.

IPL's Moranbah manufacturing plant supplies explosives for mines in Queensland's Bowen Basin. This region produces some of the world's highest quality metallurgical coal, with low ash content and low/medium volatile matter. These hard-coking coals are recognised by

Market Changes (continued)

metallurgical coal. Given the significant increase in the mining of primary metals for 'new world commodities' the reduction in the need for primary metals due to recycling will be tempered.

Physical Impacts (acute and chronic)

Impacts on Product Demand:

IPL provides products and services to end markets, individual customers and suppliers that may be impacted by changes to weather patterns resulting from climate change. Changes to the number and/or intensity of storms, hurricanes and other extreme weather events may impact IPL's end markets, primarily mining and agriculture.

The 4D scenario indicates fertiliser demand increasing in the short term, as emerging markets demand more meat, before a significant downturn associated with the economic impacts of acute extreme weather events and chronic changes in climatic conditions impacting the ability to grow crops. IPL's Asia-Pacific fertiliser revenue from exports may be impacted in the long-term (6+ years) by a decline in offshore market demand with most South-east Asian countries, which currently are IPL's predominant fertiliser export market, and small island developing states being ranked among the most vulnerable in the world by the Climate Risk Index (CRI).

IPL currently sells up to 15 percent of its Asia Pacific explosives into international markets, with most of these countries considered emerging or developing. Under a 4D scenario, explosives demand in the Asia Pacific region may be impacted in the long term (6+ years) by reduced demand in climate vulnerable nations, as indicated by the CRI.

Impacts on Operations (including supply chain):

Some of IPL's manufacturing plants are located in areas that are susceptible to extreme weather events, such as hurricanes, tropical storms and tornadoes. An increase in the severity and/or frequency of these extreme weather events as a result of climate change may cause more frequent disruption to IPL's operations directly or as a result of supply chain disruption, which includes transportation of raw materials and finished product via road, rail and water. Impacts such as these may increase in the short term (1-3 years). Under this scenario, insurance premiums would be expected to increase along with a possibility that some events may be excluded from cover.

Mitigation and Resilience

steelworks as prime coking coals used in steel manufacture, and Australian hard-coking coals are regarded as the industry benchmark. Queensland has 3.75 billion tonnes metallurgical coal with volatile matter less than 25 percent, which is enough to sustain production for many years. As IPL's competitors are likely to see demand drop in line with thermal coal decline, the Moranbah facility will retain the unique competitive advantage of being located close to these metallurgical coal mines.

In the USA the iron ore mines that we supply are mostly across Southern Canada and mid-West America. The recycling market in the USA is already very mature with two-thirds of the iron and steel produced in the USA being made from recycled scrap, rather than virgin iron ore. As the USA is a major importer of steel, the remaining primary iron ore market is likely to remain stable. As a result this risk is not considered to be material.

Mitigation and Resilience

Fertiliser demand is likely to grow due to restoration of degraded land to meet growing population needs for food and increased meat and dairy consumption. IPL currently exports fertilisers from Australia and may be able to ship to other locations where demand is retained as markets are impacted by chronic changes in climate.

We currently sell fertilisers on the spot market to a geographically diverse group of customers and have no long term reliance on a particular customer segment. We also have the competitive advantage of having manufacturing sites located primarily in Australia and the USA. These are wealthy countries which can afford to rebuild their port infrastructure in the event of rising sea-levels and damage from storm surges and other acute climate changes. For this reason, it is anticipated that IPL will be able to ship to other offshore markets which retain demand in the event that current export regions are impacted.

In the 4D scenario, the physical impacts of climate change mean that the Quarry & Construction sector is likely to assume a portion of the demand for explosives that was previously supplied to mining companies in climate vulnerable nations in the Asia Pacific region. Many new mines are expected to be developed to supply 'new world commodities' for batteries, renewables and mobility options, however, these are not expected to require the same quantity of explosives as bulk commodities. IPL's strategic focus to deliver distinctive value to our customers by leveraging our differentiated technologies to solve our customers challenges on the ground positions us to be increasingly competitive in our markets.

IPL's own manufacturing facilities are considered resilient to the anticipated acute physical impacts of climate change, with measures currently in place to manage exposure where sites are located in tornado or hurricane zones. Due to its location in a hurricane zone, the Waggaman Louisiana plant was built to comply with wind codes set out by the International Building Code Design Standard IBC 20 and Minimum Design Loads for Buildings and Other Structures ASCE 7-05. The design was signed off by a Louisiana based certified Professional Engineer with experience in design standards for the region, where the impacts of future hurricanes must be considered.

Safety and evacuation plans are in place for all personnel and sites. We endeavour to include force majeure clauses in agreements where relevant and insurance policies are in place across the Group. The location of the Moranbah facility close to high quality metallurgical coal producers would provide IPL with a strategic advantage over its competitors in the event of supply chain disruption due to extreme weather events. Domestic co-location of critical products and diversification away from single source suppliers, already being managed, will assist in managing supply chain interruption.

RISKS ASSOCIATED WITH CLIMATE CHANGE (Continued)

Physical Impacts (acute and chronic) (continued)

Interruptions to logistics from extreme weather events could result in financial loss if product cannot be stored effectively and degrades, or cannot be transferred off-site, resulting in production losses once site storage has reached capacity.

Water is a key raw material for manufacturing, with the majority used for cooling purposes. In the 4D scenario, it is predicted that average annual rainfall will be reduced and longer periods of prolonged drought will be created, especially in Eastern Australia. While this may be offset somewhat by increased 1 in 20-year flooding events at some locations, and up to 15% more rainfall than historical averages in each single rain event, water restrictions may become more frequent in some areas. In addition, the possibility of less frequent, higher intensity rainfall events may lead to the risk of storm water pond overflows. These impacts could occur in the short-term (1-3 years), with very low dam levels being recorded near some sites in the recent past.

Several manufacturing sites are located on coasts and are very close to sea level. A significant rise in sea level combined with a king tide may cause flooding events at these sites from 2030 onwards (considered a long-term risk) particularly with increased storm activity causing storm surges to become more intense.

Mitigation and Resilience

IPL is developing technology solutions to increase the shelf life of our products. Were IPL required to build additional storage to stockpile raw materials and product for temporary interruptions to logistics, and to protect product quality from humidity, flooding, heat extremes and other physical impacts, the total aggregate cost would be immaterial. At some sites additional storage, both onsite and at strategic locations along transport routes, may be necessary along with contingency plans to use alternative forms of transport to access these.

In 2019, a one-in-one hundred year flooding event in north Queensland damaged third party rail infrastructure and interrupted rail services to our remote Phosphate Hill fertiliser manufacturing facility for an extended period. Following this event a detailed review of contingency plans for rail interruptions at the site was completed. As a result, additional on-site and off-site contingency storage was built and a number of process changes were implemented which will allow IPL to better prepare for, manage and mitigate the risks associated with future rail interruptions, both minor and major. In association with the review, an internal audit was conducted by KPMG which identified further minor improvements to contingency plans and resulted in an overall rating of 'satisfactory'.

Water scarcity concerns could prompt the need for additional storage. The cost of creating additional storage (dams) in these locations is considered immaterial. Water restrictions as a result of longer periods of drought and therefore increased regulation, may also prompt IPL to seek alternative water sources. At present, no operations have been identified where sourcing of new water is considered to be too costly or unavailable. See pages 18-19 of our 2019 Sustainability Report for water management strategies at sites where water supply is a material issue.

Ongoing and long-term water management strategies are in place to ensure overflows of storm water ponds due to higher intensity rainfall events are avoided, with water balance projects completed in 2019 at three manufacturing sites in Australia using predictive rainfall models.

The construction of sea-level management infrastructure (levies, etc.) will be considered in the long-term where required for the identified manufacturing sites to manage the risk of flooding due to storm surges and sea level rise.

OPPORTUNITIES ASSOCIATED WITH CLIMATE CHANGE

Market Changes

Both the 2D and 4D scenarios describe conditions in which demand for explosives in the Quarrying and Construction sector will increase. In the 2D scenario, steady urbanisation rates and enough global wealth to support stable development will likely lead to the building, reinforcing and repairing of roads, buildings and other infrastructure. As only 1 percent of all residential buildings and commercial buildings in the USA are certified 'green', an enormous opportunity presents itself for retrofitting of buildings in a future which addresses climate change. Although not as severe as in the 4D scenario, physical impacts occur and rebuilding is required. While this will be completed in a resource efficient way, the scale of the transition is large and generates increased demand for aggregate, even though the use of recycled aggregate and re-use of building materials occurs.

The 4D scenario describes a future in which natural disasters severely impact on cities, towns and infrastructure, particularly along coasts due to sea level rise. An immense quantity of aggregate and other quarried materials is required in this scenario to rebuild, and to build new climate resilient infrastructure. This scenario describes the Quarrying and Construction sector expanding between 2020 and 2040 as the world (and the USA in particular) seeks to rebuild and protect itself from the physical impacts of climate change. From 2035, the scenario describes decreasing demand from many emerging and developing economies which cannot afford to rebuild after the cumulative losses from both the acute and chronic physical impacts of climate change.

Fertiliser demand grows in both the 2D and 4D scenarios, although domestic demand becomes more important as the physical impacts of climate change impact on international trade. The 2D scenario describes a rise in fertiliser use overall from 2025 due to increased focus on restoring the large proportion of the world's degraded agricultural land and unused land close to urban centres in order to provide food and fibre for a growing population. Artificial growing environments may be developed to meet growing demand while avoiding additional land clearing. Higher yields will need to be obtained from smaller land plots. New farms are expected to be built around urban centres, using highly controlled environments (i.e. vertical and high density farms with unique soil mixes). Products that are lower carbon and environmentally friendly (e.g. slow release fertilisers) will have a significant competitive advantage in this scenario.

In the 4D scenario, climate change is expected to result in landscape level changes to existing agricultural zones. This scenario describes a change in current soil temperatures in almost all agricultural zones, as well as changes in water content, resulting in changed growing seasons and a change in the suitability of regions for certain crops. On average, the scenario describes most regions having more days above 35 degrees and a lower proportion of minimum temperature days, relative to historical averages. The 4D scenario also indicates an increase in humidity, with longer periods of drought and more intense rainfall events impacting on the areas that are suitable for agricultural use.

Technology

IPL is currently highly dependent on the availability of affordable natural gas, both as a feedstock for hydrogen and as a fuel source. IPL continues to monitor developments in the renewables and low carbon energy space, including solar hydrogen (making use of solar energy to manufacture hydrogen from water) production.

Strategy

Our Dyno Nobel business is the second largest industrial explosives distributor in North America by volume, providing ammonium nitrate, initiating systems and services to the Quarry & Construction sector in the southern US, northeast midwest US and Canada. In 2019, 40 percent of Dyno Nobel Americas Explosives revenue was generated from this sector with strong growth due to both market and share growth.

We have a leading position in this end market, which benefits from a favourable mix of our high grade explosives, proprietary initiating systems and services. We continue to leverage our premium technology platform throughout and beyond the sector, including our proprietary Differential Energy offering. DeltaE has been in operation across the USA over the last three years and is well established in the quarry and construction and hard rock segments where customers value its safety, environmental, and efficiency benefits, including reduced GHG emissions due to reduced energy use. This technology is now being rolled out in the Asia Pacific business. See page 25 of our 2019 Sustainability Report for a case study on Delta E.

Dyno Nobel Americas also operates a Quarry Academy training centre for stone quarry operators.

During 2018, IPL reviewed its strategy, governance and funding of research and development. The position of Chief Technology Officer was added to the IPL Executive Leadership Team and six core technology programs were identified to advance IPL's ability to strategically partner with customers to improve their productivity and safety, and reduce their environmental and social impacts.

Collaborative research and product development, both with our customers and with recognised research bodies, is a core strategy and we aim to be well placed to meet changing growing conditions as they emerge, including those described by the 2D and 4D scenarios. Projects in 2019 are reported on pages 22-29 of our 2019 Sustainability Report.

IPL currently operates in all four major climatic zones in Australia, including far North Queensland where some conditions are similar to those which may be experienced further south in the very long-term. This presents an opportunity for IPL to produce new suitable products that match the kinds of volatility that is likely to be experienced by farmers. IPL also has a strong competitive advantage in its existing distribution networks, enabling it to roll out new products quickly and easily to a range of affected customers. Our currently marketed high-efficiency, slow release fertilisers, which have been shown to increase yields and reduce GHG emissions from agriculture, are likely to be in high demand in the conditions described in the 4D scenario. See page 26-29 of our 2019 Sustainability Report.

Strategy

IPL has a core competency in the manufacture, storage and transportation of ammonia and is well placed to play a role in the 'green hydrogen' (and therefore green ammonia) and low carbon economy. Feedstock and energy options such as solar hydrogen are constantly assessed for viability as part of IPL's overall capital management framework, supported by two of our strategic values drivers, Leading Technology Solutions and Manufacturing Excellence. Read about our \$2.7 million Solar Hydrogen Feasibility Study on page 21 of our 2019 Sustainability Report.

TCFD Recommended Disclosures

TCFD Recommended Disclosure	Location of Disclosure
Governance:	
Disclose the organization's governance around climate-related risks and opportunities	2019 IPL Sustainability Report, p 20-21.
a) Describe the Board's oversight of climate-related risks and opportunities.	2019 IPL Sustainability Report, p 20-21.
b) Describe management's role in assessing and managing climate-related risks and opportunities.	2019 IPL Sustainability Report, p 20-21.
Strategy	
Disclose the actual and potential impacts of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning where such information is material.	2019 IPL Sustainability Report, p 20-21.
a) Describe the climate-related risks and opportunities the organization has identified over the short, medium, and long term.	This '2019 GRI Index and Data' document, p 14-17. 2019 IPL Annual Report, p 30-32. 2019 IPL CDP Report
b) Describe the impact of climate-related risks and opportunities on the organization's businesses, strategy, and financial planning.	This '2019 GRI Index and Data' document, p 14-17. 2019 IPL Annual Report, p 30-32. IPL Climate Change Policy 2019 IPL Sustainability Report, p 20-21.
c) Describe the resilience of the organization's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	2019 IPL Sustainability Report, p 20-21. IPL Climate Change Policy This '2019 GRI Index and Data' document, p 14-17. 2019 IPL Annual Report, p 30-32.
Risk Management	
Disclose how the organization identifies, assesses, and manages climate-related risks.	2019 IPL Sustainability Report, p 20-21. 2019 IPL Annual Report, p 30-32. 2018 IPL Sustainability Report, p 13-19 (describes the IPL Climate Change Scenario Methodology in detail)
a) Describe the organization's processes for identifying and assessing climate-related risks.	2019 IPL Sustainability Report, p 20-21. 2019 IPL Annual Report, p 30-32. 2018 IPL Sustainability Report, p 13-19 (describes the IPL Climate Change Scenario Methodology in detail)
b) Describe the organization's processes for managing climate-related risks.	2019 IPL Sustainability Report, p 20-21. IPL Climate Change Policy This '2019 GRI Index and Data' document, p 14-17
c) Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organization's overall risk management.	2019 IPL Sustainability Report, p 20-21.
Metrics and Targets	
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	2019 IPL Sustainability Report, p 8 and 16 'Our Targets' in 2019 IPL Sustainability Report, p 9
a) Disclose the metrics used by the organization to assess climate-related risks and opportunities in line with its strategy and risk management process.	Page 19 of this document (opposite page). For management strategies, see pages 14-17 of this '2019 GRI Index and Data' document and the IPL Climate Change Policy.
b) Disclose Scope 1, Scope 2, and, if appropriate, Scope 3 greenhouse gas (GHG) emissions, and the related risks.	2019 IPL Sustainability Report, p 8, 16-17 and 31. This '2019 GRI Index and Data' document p 14-17
c) Describe the targets used by the organization to manage climate-related risks and opportunities and performance against targets.	See 'Our Targets' in 2019 IPL Sustainability Report, p 9. Further targets associated with the metrics on page 19 of this document (opposite page) are under development.

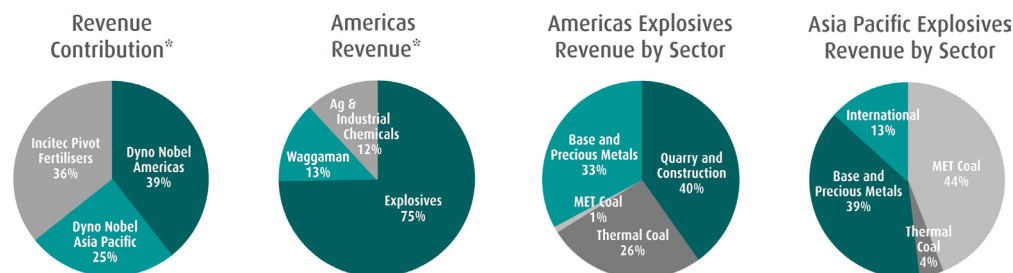
METRICS USED TO ASSESS AND MANAGE CLIMATE RELATED RISKS AND OPPORTUNITIES

Physical Risks	2017	2018	2019
Financial impact due to weather-related events	AUD \$10 million (Flood - Australia)	AUD \$19.8 million (Drought - Australia)	AUD \$148.6 million (Flood & drought - Australia)
Percentage of freshwater withdrawn in regions with high or extremely high baseline water stress	25%	22%	23%
Water withdrawal intensity (kl/t product manufactured for sale)	13	13	13
Physical Opportunities - Explosives Compound annual growth rate from FY2016 to FY 2019			
Increasing demand for climate adaptation products - Growth rate: premium gassed emulsions (including Delta E)		Dyno Nobel Americas 28% Dyno Nobel Asia Pacific 16%	
Physical Opportunities - Fertilisers			
Increasing demand for climate adaptation products - Revenues from high efficiency fertilisers (Green Urea, Entec, eNpower)	AUD \$21.4 million	AUD \$20.7 million	AUD \$19.0 million ¹
Transition Risks			
GHG intensity per tonne ammonia produced (tCO2e per t ammonia)	2.04	1.90	1.98
GHG intensity per tonne nitric acid produced (tCO2e per t nitric acid)	0.04	0.42	0.71 ²
Scope 1 emissions (tCO2e)	2,749,847	3,423,867 ³	3,080,346
Scope 2 emissions (tCO2e)	336,707	327,536	307,167
Number of major manufacturing facilities included in regional or national carbon pricing schemes	3	3	3
Number of major manufacturing facilities financially impacted by regional or national carbon pricing schemes	0	1	1
% Revenues - supply of explosives to thermal coal mining: Americas	26%	27%	26%
% Revenues - supply of explosives to thermal coal mining: Asia Pacific	4%	3%	4%
Transition Opportunities			
Number of climate-related research projects funded	3	3	4
Number of patents held for reduced carbon products/technologies	10	10	10

1. Decrease in 2019 is mostly attributable to the impact of adverse weather conditions on agriculture in Australia during the 2019 reporting period.
2. An unexpected maintenance issue at IPL's nitric acid plant at Moranbah in Australia late in the 2018 financial year resulted in an unexpected increase in emissions of N2O (a potent GHG) at the site, impacting on our global tCO2e per tonne of nitric acid

produced. To address this, IPL invested \$4 million in the fabrication and installation of new equipment and \$1.8 million in GHG abatement catalyst replacement during the 2019 financial year.

3. Increase due to the ramping up of the new Waggaman, Louisiana Ammonia plant which increased production and absolute emissions, but decreased emissions intensity.



*Excludes corporate elimination