

# SUSTAINABILITY REPORT 2020



**Incitec Pivot Limited**

**DYNO**  
Dyno Nobel



INNOVATION ON THE GROUND

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## BENCHMARKING OUR PERFORMANCE

As part of our commitment to transparent reporting, IPL's sustainability practices are assessed against leading indices. This gives us the opportunity to benchmark our performance against other organisations in our sectors, provides insight into areas for improvement, and provides investors and other stakeholders with an objective measure of our environmental, social and governance (ESG) risk management and business practices.

| DJSI Dimension           | 2015      | 2016      | 2017      | 2018      | 2019      | 2020      |
|--------------------------|-----------|-----------|-----------|-----------|-----------|-----------|
| Economic                 | 67        | 74        | 73        | 71        | 72        | 78        |
| Environmental            | 51        | 60        | 61        | 64        | 73        | 71        |
| Social                   | 63        | 65        | 68        | 57        | 60        | 58        |
| <b>Total for IPL</b>     | <b>60</b> | <b>67</b> | <b>68</b> | <b>65</b> | <b>69</b> | <b>69</b> |
| Chemicals Sector Average | 58        | 56        | 53        | 44        | 47        | 36        |

**Sustainability Yearbook**  
 Member 2021  
**S&P Global**

**S&P Global DJSI**  
 Member since 2010

Since 2010 IPL has been included in the Dow Jones Sustainability Index (DJSI) where we are benchmarked against peers in the global 'Chemicals' sector. In 2020, the FTSE Group again confirmed that IPL has been independently assessed according to the FTSE4Good criteria, and has satisfied the requirements to remain a constituent of the FTSE4Good Index Series for the sixth year running. Companies in the FTSE4Good Index Series have met stringent environmental, social and governance criteria. Other indices and memberships are shown below.



**EcoVadis**  
 Member since 2015.  
 EcoVadis is assessed biennially. Our next assessment will be in 2021



**FTSE4Good**

Member since 2014



**Bloomberg GEI**  
 2019 and 2020 Member



**Climate Change since 2009**  
 IPL has been a voluntary CDP (formerly Carbon Disclosure Project) Climate Change reporter since 2009 and uses future climate change scenarios to report. Our most recent CDP Climate Change report can be downloaded [here](#).



**Water Security since 2014**  
 IPL has been a voluntary CDP Water Security reporter since its introduction in 2014 and uses the WRI Aqueduct Tool to report. Our most recent Water Security report can be downloaded [here](#).

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## ABOUT THIS REPORT

Since 2010, Incitec Pivot Limited (IPL) has produced a stand-alone Sustainability Report, incrementally improving disclosure each year against the Global Reporting Initiative (GRI) Guidelines. This is the seventh year that sustainability data has been included in the [Annual Report](#), thereby providing a full account of IPL's annual economic, environmental, social and governance performance in one document.

This online interactive Sustainability Report contains further information on those issues most material to the sustainability of IPL in 2020 so that stakeholders can better understand our Zero Harm focus and our management of environmental, social and governance issues. The Report covers the 12 month period from 1 October 2019 to 30 September 2020, the Company's financial year. Our last Sustainability Report was also published online, in March 2020 for the 2019 financial year. It can be downloaded [here](#) along with prior year sustainability reports.

This Report covers the performance of IPL and its subsidiaries and the activities over which we have operational control for all or part of the financial year ended 30 September 2020. This period is referred to throughout the report as '2020'. Together, this online Report, the [2020 Sustainability Summary](#), the [2020 Annual Report](#) and the [2020 Corporate Governance Statement](#) provide the full account of IPL's performance for the period.

This online interactive report has been prepared in accordance with the GRI Standards: Core option. See our [GRI Index and Data](#) [here](#).

We recognise the need to report on issues most relevant to our business and our key stakeholders, and we welcome feedback on this Report and our sustainability progress. Please direct any questions or comments regarding this Report or its content to us via [sustainability.feedback@incitecpivot.com.au](mailto:sustainability.feedback@incitecpivot.com.au)

## A MESSAGE FROM OUR CEO



The safety of our people, customers and communities has continued to be our primary focus during this unprecedented year. Faced with many new challenges, our business has proven its resilience throughout 2020 and we have continued to progress our important sustainability agenda.

In line with our strategy, we aim to deliver sustainable growth and shareholder returns, while proactively managing those issues most material to the long-term sustainability of our business, the broader environment and the communities in which we operate. For 10 years we have produced a stand-alone, GRI-aligned Sustainability Report as part of our commitment to transparency and to effectively and efficiently inform and meet the needs of our diverse stakeholder group.

With the global pandemic having an unprecedented impact on businesses and communities around the world, there has never been a more important time to live our number one value of Zero Harm and we have seen significant improvements in key safety measures. In 2018 we set a goal for a step change in our workforce Total Recordable Injury Frequency Rate (TRIFR) to achieve a 30% reduction by 2021. In 2020 we reported a TRIFR of 0.57, delivering our 2021 target of 0.70 a year early. We've also seen a significant improvement in process safety incidents, down to 24 compared to 33 last year.

Tragically, two people, including one of our employees, died in a multi-motor vehicle accident in April on a public road in South Carolina. The tragic loss of life is a stark reminder of the importance of embedding Zero Harm as the number one value and priority right across our global business.

Zero Harm applies as much to our impact on the environment as it does to safety, and this has continued to be a focus in 2020, with a reduction of significant environmental incidents from three last year to one this year. As part of our Zero Harm strategy we invested \$4.5m in leading practice environmental controls at our Townsville Fertiliser Primary Distribution Centre and developed a process to move to a more proactive and rigorous demonstration of compliance to environmental licence and permit obligations, which is being implemented in 2021.

We continue to progress our important climate change management agenda. In August, I became a founding member of the Australian Climate Leaders Coalition (CLC) to help drive progress in creating a low carbon future for Australia. Joining a range of CEOs supporting the Paris Agreement commitments and setting public decarbonisation targets, we will learn from each other as we progress our own business initiatives to reduce emissions.

In line with this action, we accelerated our own decarbonisation strategy with our first absolute reduction target of 5% in operational emissions by 2026. This is approximately 200,000 tCO2e, or the equivalent of more than 43,000 passenger vehicles driven in a year. We recognise that reducing greenhouse gases (GHG) in line with the Paris Agreement will require much deeper emissions reductions and we are committed to investigating new and emerging decarbonisation pathways in our hard-to-abate sector.

In 2020 we completed a \$2.7m Solar Hydrogen Feasibility study looking at the feasibility of ammonia production from industrial-scale solar hydrogen. During 2021, we aim to use the results of this study, along

with other investigations, to examine and develop potential pathways to Net Zero operational emissions by 2050.

A key element of our decarbonisation strategy is to support our customers in reducing their GHG emissions and, as part of our ongoing commitment to transparency, this year we have initiated reporting of our value chain (Scope 3) GHG emissions. The use of our premium technologies is helping our customers reduce their emissions. For example, both our enhanced efficiency fertilisers and our Delta E proprietary explosives method reduce our fertiliser and explosives customers' GHG emissions during their use. These technologies are easy for our customers to adopt and drive meaningful improvements in crop yields, mine and quarry productivity, safety and other environmental impacts.

During the year we made the decision to retain and invest in our fertiliser business which is Australia's leading and only integrated supplier of premium fertiliser solutions on the east coast. Following our 2020 strategic review, our long-term strategy is to grow IPF from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company, providing plant nutrition solutions to improve soil health. Our strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health.

Talented and engaged people remain key to the delivery of our One IPL mindset, which emphasises collaboration across our global operations to make us stronger together. We remain committed to our gender diversity stretch target of a 25% female global workforce by September 2022. Key highlights of our progress this year include an 8.7% increase in gender diversity across our Asia Pacific workforce and a 6.2% increase in Australia, to a 24.1% female Australian workforce.

We continued our site-based community engagement and investment approach throughout 2020, with local teams working across the globe to engage with their diverse and unique communities. In particular, our resilient people have been united in our response to provide community support during the COVID-19 pandemic. They also came together from far and wide to volunteer as emergency first responders and fundraisers in response to the disastrous bushfires on the East Coast of Australia.

For the fifth year, this online Sustainability Report supplements the short form Sustainability Overview in our Annual Report. I welcome your interest in our Sustainability Report and your feedback, as we continue to work with our customers and all our stakeholders to better care for our people, our communities and the environment.

Jeanne Johns  
Managing Director and CEO

## OUR STRATEGIC APPROACH

**Our Sustainability Strategy is to deliver sustainable growth and shareholder returns while caring for our people, our communities and our environment.**

IPL is committed to operating in a manner which acknowledges and proactively manages those issues which are most material to the long term sustainability of our business, the environment and the communities in which we operate. As described in our Value Creation Model on the following page, this commitment is driven by our Company Values which are core to our business, and built into our Strategic Drivers, to deliver outcomes which include a safe and high performing workplace, mutually beneficial partnerships with our customers, long-term and meaningful relationships with our local communities and a continued drive towards increasing resource efficiencies and environmental improvements.

### The Precautionary Principle

The Precautionary Principle advises that when an activity raises threats of harm to the environment or human health, precautionary measures should be taken even if some cause and effect relationships are not fully established scientifically. IPL recognises that there are risks and opportunities associated with climate change, and our risk management procedures associated with these are reported in our CDP responses, our Annual Reports under Principal Risks, and under Managing Climate Change in this report. We also seek to mitigate our impact by exploring new ways to reduce our energy use and greenhouse gas emissions.

### Content Selection Process

IPL recognises the need to provide focused and accessible disclosures on the topics that are most important to our stakeholders. With this in mind, we conduct a biennial formal materiality assessment to identify and rank the topics that matter most to our stakeholders, and to our business success. The steps in this process follow GRI guidelines and are summarised in the diagram to the right.

The output of the most recent review, conducted in 2019, is summarised in the table below which shows the chapter in which each topic is discussed. 'Economic Performance' is addressed in the [IPL 2020 Annual Report](#). The other material topics have been used to shape this report, with content on some non-material issues also included. Material topics are grouped into 10 main material issues on the following page.

### Material Topics and other topics by Report Section

| How We Operate   | Zero Harm   | Resource Efficiency and Emissions  | Managing the Impacts of Climate Change   | Sustainable Products and Services  | Talented, Diverse and Engaged Workforce   | Caring for our Communities   |
|--|---|--|--|--|---|--|
| <ul style="list-style-type: none"> <li>Ensuring Ethical Conduct</li> <li>Modern Slavery</li> </ul> | <ul style="list-style-type: none"> <li>Workplace Safety</li> <li>Employee Health and Well Being</li> <li>Managing Environmental Impacts:</li> <li>Environmental Compliance</li> </ul> | <ul style="list-style-type: none"> <li>Managing Environmental Impacts:</li> <li>Energy and GHG</li> <li>Water</li> <li>Waste</li> <li>NOx and SOx emissions</li> </ul> | <ul style="list-style-type: none"> <li>Climate Change Governance and Strategy</li> <li>Climate Change Risks and Opportunities</li> </ul> | <ul style="list-style-type: none"> <li>Customer Safety</li> <li>Customer Relationships</li> <li>Innovation and Technology</li> <li>Collaborative Research and Development</li> <li>Product Quality Working with Our Suppliers</li> </ul> | <ul style="list-style-type: none"> <li>Employee Engagement</li> <li>Diversity</li> <li>Talent Attraction and Retention</li> </ul> | <ul style="list-style-type: none"> <li>Community Safety</li> <li>Community Engagement</li> </ul> |

• Topics identified as material sustainability topics: these are grouped into 'Material Issues' on the following page.

### Our Materiality Assessment Process follows Global Reporting Initiative (GRI) guidelines



## Material Issues

Ensuring Ethical Conduct

Climate Change Governance and Strategy

Workplace Safety

Employee Health and Wellbeing

Community Safety

Managing Environmental Impacts: Environmental Compliance

Sustainable Economic Performance

Climate Change Risks and Opportunities

Community Engagement

Resource Efficiency and Emissions

Sustainable Products, Services and Customer Relationships

Innovation and Technology

Product Quality

Employee Engagement

Diversity

Talent Attraction and Retention

## Our Strategic Approach

### Strong Governance:

As part of our commitment to operating to the highest standards of ethical behaviour, our policies and practices set ethical standards for directors and employees, and our Supplier Code of Conduct outlines our expectations for [suppliers](#) and contractors.

Our governance framework and practices are consistent with the ASX Corporate Governance Council's Corporate Governance Principles and Recommendations (3<sup>rd</sup> Edition). For more detail on governance, see [How We Operate](#) and the [2020 IPL Corporate Governance Statement](#).

### Zero Harm:

We set continuous improvement objectives across key metrics including health, safety, environment and process safety as part of ensuring a safe, high performing workplace through: easy-to-use systems and processes; non-negotiable safety and environmental standards; a high level of ownership and accountability; and a strong supportive safety learning culture. See our [Zero Harm](#) section for more detail.

### Profitable Growth:

Focusing on existing and new opportunities that are distinctive to our differentiated technology, core markets, core capabilities and market segments to deliver sustainable returns for our shareholders; driven by a focus on continuous improvement, cost efficiency and the strategic management of [climate risks and opportunities](#).

Building long-term and meaningful relationships with our local communities through an active and grassroots approach to community engagement, and the economic development that flows from employment opportunities provided by our business and the natural resources unlocked by our products. See [Caring for Our Communities](#) for more detail.

### Manufacturing Excellence:

Driving consistency across the performance of our assets with a focus on continuous improvement in measurement and monitoring, the efficient use of energy and water, and exploring new ways to reduce our greenhouse gas emissions. See [Resource Efficiency and Emissions](#) and the key findings of our [Solar Hydrogen Feasibility Study](#) for more details.

### Customer Focus:

Partnering with customers and research institutions to develop new products and specific, sustainable solutions.

### Leading Technology Solutions:

Providing innovation on the ground that our customers can use to increase profitability and safety, and reduce environmental and social impacts. See our [Sustainable Explosives](#) and [Fertilisers](#) sections.

### Talented, Engaged and Diverse People:

Building a One IPL collaborative and high performing culture with engaged, diverse and inclusive teams through: strengthening our learning culture; enabling innovation through diversity of people and perspectives; and attracting and developing high potential talent. See [Ensuring A Talented, Engaged & Diverse Workforce](#) and the [2020 IPL Corporate Governance Statement](#).

## 2020 Highlights

- Adoption and implementation of IPL's Modern Slavery Policy.
- Competition law training for all applicable employees.

- Completion of a \$2.7m Solar Hydrogen Feasibility Study, supported by ARENA, for renewable ammonia production at Moranbah, Queensland, as part of our climate change management strategy.

- Achieving our FY21 TRIFR goal of 0.70 a year early with 0.57 in 2020.
- 27% reduction in Tier 1 and Tier 2 Process Safety Incidents.
- 100% compliance with required Community Safety Communications.
- \$4.5m invested in leading practise environmental controls at our Townsville IPF Primary Distribution Centre.

- \$3,942.2m Revenue for 2020.
- \$374.5m EBIT for 2020.
- Engagement of a specialist third party to update our future climate-related scenarios and refresh our climate change risk & opportunities assessment in 2021.

- \$0.5m Community Investment.
- 1,826m metric tonnes of resources mined using our explosives.
- 32m metric tonnes of food and fibre grown by Australian farmers using our fertilisers.

- 36% reduction in NOx per tonne of nitric acid produced against a 2015 baseline.
- 10% reduction in GHG emissions per tonne of ammonia produced against a 2015 baseline.
- Setting an absolute GHG reduction target of 5% by 2026 against our 2020 baseline.<sup>1</sup>

- 24% increase in customer satisfaction.
- 300+ Agronomists at our industry accredited IPF Agronomy in Practice course over the last three years.
- 7 Joint research partnerships.
- Growth in technology based sales volumes since 2016, with a Compound Annual Growth Rate of 32% for Electronic Detonator Systems and 24% for Premium Emulsions.

- Improved employee engagement scores at targeted sites across 2020.
- Increase in global gender diversity, with an 8.7% increase across our Asia Pacific business.
- Refresh of our Australian Manufacturing Graduate Program.

## Aligning with the UN Sustainable Development Goals

### Priority SDG Goal and Relevant SDG Targets



### TAKE URGENT ACTION TO TACKLE CLIMATE CHANGE AND ITS IMPACTS

Target 13.1: Strengthen resilience and adaptive capacity to climate-related disasters.  
Target 13.2: Integrate climate change measures into policy and planning.

### IPL Contribution and Targets

- Comprehensive physical and transitional risk assessment against 2 and 4 degree future climate related scenarios, including a site by site analysis for our 12 major manufacturing sites, refreshed 3 yearly.
- Climate change management, including GHG emissions reduction, is integrated into our six core Strategic Drivers, upon which the success of the company is built.
- \$2.7m Solar Hydrogen Feasibility Study to investigate renewable ammonia production at Moranbah, Queensland.

**Target: Absolute GHG reduction target of 5% by 2026 against our 2020 baseline.<sup>1</sup>**



### END HUNGER, ACHIEVE FOOD SECURITY & IMPROVED NUTRITION AND PROMOTE SUSTAINABLE AGRICULTURE

Target 2.4: By 2030, ensure sustainable food production systems and implement resilient agricultural practices that increase productivity and production, that help maintain ecosystems, that strengthen capacity for adaptation to climate change, extreme weather, drought, flooding and other disasters and that progressively improve land and soil quality.

- Our long term strategy is to grow IPF from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company providing plant nutrition solutions to improve soil health.
- Joint research project with the University of Melbourne into new fertiliser technologies for sustained food security.
- Contributing to the Australia-China Joint Research Centre of Healthy Soils for Sustainable Food Production & Environmental Quality.
- Continued work on a partnership with the University of Adelaide & CSIRO to develop novel urea coatings for use in arid cropping zones.
- Testing of silicon fertilisers which have been shown to increase heat stress resistance in crops, which is important as local climates change.

**Target: 20% increase in soils and plant testing by 2023 to promote sustainable use of fertilisers to our customers**



### ACHIEVE GENDER EQUALITY AND EMPOWER ALL WOMEN AND GIRLS

Target 5.5: Ensure women's full and effective participation and equal opportunities for leadership at all levels of decision-making in political, economic and public life.

- Year-on-year increase in female employees in 2020 with a 6.2% increase in Australia and 8.7% across Asia Pacific.

**Stretch Target: To achieve a participation rate of 25% women across our global workforce by 30 September 2022.**



### ENSURE AVAILABILITY AND SUSTAINABLE MANAGEMENT OF WATER FOR ALL

Target 6.4: By 2030, substantially increase water-use efficiency across all sectors and ensure sustainable withdrawals and supply of freshwater to address water scarcity.

- We are investing \$4m in a pipeline to bring recycled water to our Gibson Island ammonia manufacturing site. Due to the use of large volumes of cooling water at this site, the use of recycled water will leave 6 million litres of potable water a day in south-east Queensland dams for our local community.

**Target: 25% reduction in our Australian municipal water use by 2023.**



### ENSURE SUSTAINABLE CONSUMPTION AND PRODUCTION PATTERNS

Target 12.6: Encourage companies, especially large transnational companies, to adopt sustainable practices and to integrate sustainability information into their reporting.

- Our adoption of sustainable practices is outlined throughout this report.

**Target: Annual Sustainability Reporting to GRI Standards: 'Core' option.**

The UN SDGs are a set of 17 goals and 169 targets adopted by world leaders at the United Nations to end poverty, fight inequality and tackle climate change by 2030.

Although primarily designed for governments, the SDGs call for action by all countries & stakeholders and we recognise that we can contribute. During 2020, IPL conducted an analysis of our business strategy and material sustainability issues to identify our priority SDG goals and targets.

1. IPL's total global 2020 emissions were 3,616,740 tCO2e. The 2020 GHG baseline is subject to adjustment due to unforeseen future expansions and acquisitions/divestments which may occur before the end of the 2026 IPL financial year.

# OUR VALUE CREATION MODEL

**Our purpose** is to make people's lives better by unlocking the world's natural resources through innovation on the ground

## Who we are

IPL is a recognised world leader in the resources and agricultural sectors. We manufacture ammonium nitrate-based explosives, nitrogen and phosphorus fertilisers, and nitrogen related industrial and speciality chemicals.



Through our two customer facing businesses, Dyno Nobel in the Americas (DNA) and across Asia Pacific (DNAP) and our fertiliser business – the largest in Australia, Incitec Pivot Fertilisers (IPF), we make people's lives better by unlocking the world's natural resources through innovation on the ground.

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

## Issues most material to our business' sustainability

- Workplace health and safety
- Managing the impacts of climate change
- Ensuring ethical conduct
- Managing, engaging and ensuring a diverse workforce
- Sustainable economic performance
- Managing environmental impacts
- Sustainable products, services and customer relationships
- Resource efficiency and GHG emissions
- Product quality
- Caring for our communities

## Our strategy

To deliver sustainable growth and shareholder returns while caring for our people, our communities and our environment.

### Inputs



### OUR STRATEGIC DRIVERS



### Outputs



### Outcomes

**A safe, diverse and high performing workplace** built upon easy-to-use systems and processes; non-negotiable safety and environmental standards; a high level of ownership and accountability; a learning culture; and innovation enabled through diversity of people and perspectives.

**Mutually beneficial partnerships with our customers** that provide them with efficient, quality products that reduce their environmental and social impacts; improve operational safety; and give them access to ongoing research and development.

**Sustainable returns for our shareholders** driven by our focus on new opportunities; continuous improvement and cost efficiency; and strategic management of climate risk.

**Continued drive towards environmental improvements** through consistently applying non-negotiable environmental standards; using energy and water more efficiently; and exploring new ways, such as solar hydrogen, to reduce greenhouse gas emissions.

**Long-term and meaningful relationships with our local communities** through an active and grass-roots approach to community engagement; the measures we use to monitor, manage and prevent potential negative impacts; the economic development that flows from employment provided by our business and the resources our products unlock, such as quarry and construction materials, iron ore and other metals, and increased crop yields.

## Governance

We are committed to achieving and demonstrating the highest standards of corporate governance. Our governance framework and practices are consistent with the Australian Securities Exchange (ASX) Corporate Governance Council's Corporate Governance Principles and Recommendations (3rd Edition).

- Code of Conduct
- Climate Change Policy
- Modern Slavery Policy
- Diversity Policy

# SUSTAINABILITY SCORECARD

The Sustainability Scorecard shows our performance across a range of economic, social and environmental indicators for the past three years.

| Indicator (Unit of measure)  | 2018                | 2019             | 2020             |
|--|---------------------|------------------|------------------|
| Product manufactured for sale (million tonnes)                             | 4.0                 | 3.5              | 3.8              |
| <b>Zero Harm - Key Metrics</b>   | <b>2018</b>         | <b>2019</b>      | <b>2020</b>      |
| Total Recordable Injury Frequency Rate <sup>1</sup>                        | 0.94                | 0.80             | 0.57             |
| Employee fatalities  | 0                   | 0                | 1                |
| Contractor fatalities  | 0                   | 0                | 0                |
| Potential high severity incidents <sup>2</sup>                             | 42                  | 33 <sup>3</sup>  | 34               |
| Process safety incidents <sup>4</sup>                                      | 27                  | 33               | 24               |
| Significant environmental incidents <sup>5</sup>                           | 1                   | 3                | 1                |
| <b>Resource Efficiency and Emissions</b>                                   | <b>2018</b>         | <b>2019</b>      | <b>2020</b>      |
| <b>Operational GHG Emissions (tCO2e)</b>                                   |                     |                  |                  |
| Direct Operational GHG (Scope 1)   | 3,423,867           | 3,080,346        | 3,319,416        |
| Indirect Operational GHG (Scope 2)   | 327,536             | 307,167          | 297,324          |
| <b>Total Operational GHG (Scope 1+2)</b>                                   | <b>3,751,403</b>    | <b>3,387,513</b> | <b>3,616,740</b> |
| GHG Intensity per t ammonia  | 1.90                | 1.98             | 1.90             |
| GHG Intensity per t nitric acid  | 0.4                 | 0.71             | 0.69             |
| <b>Operational + Value Chain GHG Emissions (tCO2e)</b>                     |                     |                  |                  |
| Value Chain GHG (Scope 3) <sup>6</sup>                                     | 6,167,336           | 5,783,532        | 5,894,323        |
| <b>Total GHG (Scope 1+2+3)</b>   | <b>9,918,739</b>    | <b>9,261,045</b> | <b>9,511,063</b> |
| <b>NOx and SOx emissions</b>   |                     |                  |                  |
| Total NOx emissions (tonnes NOx)   | 3,143               | 2,498            | 2,906            |
| Total SOx emissions (tonnes SOx)   | 14,459 <sup>7</sup> | 14,285           | 18,852           |
| <b>Energy (GJ)</b>   |                     |                  |                  |
| Global direct energy consumption   | 68,500,621          | 60,553,895       | 66,383,873       |
| % energy from fossil fuels <sup>8</sup>                                    | 95%                 | 95%              | 96%              |
| <b>Water (GL)</b>  |                     |                  |                  |
| Gross water withdrawal   | 50.5                | 45.5             | 43.9             |
| Water discharge <sup>9</sup>   | 30.9                | 30.4             | 29.7             |
| Net water use <sup>10</sup>  | 23.0                | 15.4             | 14.5             |
| <b>Waste</b>   |                     |                  |                  |
| Global solid waste (kt)  | 6.6                 | 8.0              | 6.3              |
| Solid waste recycled (%)   | 21%                 | 24%              | 31%              |
| Global solid chemical waste (kt)   | 2,307.5             | 1,799.3          | 2,758.6          |
| Solid chemical waste: phogypsum %  | 99.97%              | 99.58%           | 99.98%           |
| Global liquid waste (ML)   | 19.6                | 19.7             | 32.2             |
| Global liquid waste recycled (%)   | 60%                 | 56%              | 82%              |
| <b>Global waste recycled (% excl. phogypsum stockpiled onsite)</b>         | <b>48.6%</b>        | <b>36.9%</b>     | <b>72.6%</b>     |
| Global hazardous waste <sup>11</sup> (% excl. phogypsum stockpiled onsite) | 30.1%               | 45.7%            | 11.8%            |
| <b>People</b>  | <b>2018</b>         | <b>2019</b>      | <b>2020</b>      |
| <b>Total workforce (excl. contractors)</b>                                 | <b>4,766</b>        | <b>4,820</b>     | <b>4,859</b>     |
| Americas   | 2,452               | 2,527            | 2,554            |
| Asia Pacific   | 2,050               | 2,067            | 2,091            |
| Europe   | 264                 | 226              | 214              |
| <b>Gender Diversity (% female)</b>   |                     |                  |                  |
| Board <sup>12</sup>  | 42.9%               | 50.0%            | 50.0%            |
| Executive Team   | 22.0%               | 30.0%            | 20.0%            |
| Senior Management <sup>13</sup>  | 16.7%               | 22.0%            | 20.2%            |
| Professional/Management Roles  | 18.9%               | 19.5%            | 20.1%            |
| Global   | 15.9%               | 17.2%            | 17.6%            |
| <b>Indigenous Australians (% Australian workforce)</b>                     | <b>2.6%</b>         | <b>3.0%</b>      | <b>2.7%</b>      |

| Direct Economic Value Generated & Distributed   | 2018           | 2019           | 2020           |
|---|----------------|----------------|----------------|
| <b>A. Direct economic value generated (AUD\$M)</b>                                      |                |                |                |
| Revenues  | 3,903.4        | 3,975.1        | 3,976.1        |
| <b>B. Economic value distributed</b>  | <b>4,083.7</b> | <b>4,171.7</b> | <b>4,089.8</b> |
| Operating costs incl. payments to suppliers, non-strategic investments and royalties    | 3,201.1        | 3,180.4        | 3,147.2        |
| Employee wages and benefits: total monetary outflows for employees (current payments)   | 650.1          | 682.0          | 719.8          |
| Payment to providers of capital, including dividends and interest                       | 159.8          | 127.6          | 54.6           |
| Government taxes (income tax, payroll tax, Australian GST & FT and fringe benefits tax) | 171.2          | 180.8          | 167.7          |
| Voluntary community investments   | 0.5            | 0.9            | 0.5            |
| <b>C. Economic value retained (A-B)</b>   | <b>(180.3)</b> | <b>(196.6)</b> | <b>(113.7)</b> |
| <b>Government Taxes Paid Per Country</b>  | <b>2018</b>    | <b>2019</b>    | <b>2020</b>    |
| Australia <sup>14</sup>   | 88.3           | 85.3           | 92.4           |
| United States   | 32.3           | 39.5           | 30.5           |
| Mexico  | 5.0            | 3.8            | 3.9            |
| Canada  | 31.1           | 28.5           | 29.4           |
| Chile   | 3.3            | 8.0            | 3.0            |
| Hong Kong   | 0.0            | 3.1            | 0.2            |
| Turkey  | 5.5            | 4.7            | 2.9            |
| Indonesia   | 4.1            | 5.5            | 4.3            |
| Papua New Guinea  | 1.6            | 2.3            | 1.1            |

- TRIFR is the number of recordable incidents per 200,000 hours worked and includes contractors. TRIFR results are subject to finalisation of the classification of any pending incidents.
- Incidents with potential consequences of 5 or higher on a 6-level scale (excluding near misses and hazards).
- Restated to 33 from 34 due to the downgrading of one event during 2020.
- Tier 1 and Tier 2 Process Safety Incidents as defined by the Center for Chemical Process Safety.
- Environmental Incidents as assessed against IPL's internal risk matrix with actual consequences of 5 or higher on a 6-level scale. A category 5 environmental incident is 'a major event or environmental repeat non-compliance with regulatory, licence or permit conditions leading to prosecution or restriction of operations' and a Category 6 environmental incident is one which results in 'permanent or long-term impacts to water, land, biodiversity, air or ecosystems and requires significant remediation, rectification or investment in mitigation'.
- Scope 3 GHG emissions include both upstream and downstream emissions from material sources in IPL's value chain.
- Restated due to improved calculation methodology.
- Excluding natural gas feedstock and diesel used as production raw material.
- Includes stormwater at several sites where it is captured and treated along with other discharge before release.
- Gross water use minus clean water discharge.
- The percentage of hazardous waste varies year on year due to scheduled site maintenance shutdowns.
- The IPL Managing Director & CEO is classified as a Board member.
- Defined as roles which are 1-2 levels below the Executive Team.
- Volatility in Australian taxes paid year-on-year is due to changes in IPL's Australian business earnings.

# OUR TARGETS

Our targets, our performance and our progress towards future targets is summarised in the table below.

| TOPIC   | METRIC  | 2020 TARGET  | 2020 Progress            | FUTURE TARGET   |
|---|---|--|--------------------------|---|
| <b>Zero Harm</b>  |   |  |                          |   |
| <b>Workplace Safety</b>                                   | TRIFR <sup>1</sup> (includes contractors)   | Year-on-year reduction   | 0.57 (-29%) ●            | Year-on-year reduction  |
|   | Potential high severity incidents <sup>2</sup>  | Year-on-year reduction   | 34 (+3%) ●               | Year-on-year reduction  |
|   | Tier 1 & 2 process safety incidents <sup>3</sup>                                      | Year-on-year reduction   | 24 (-27%) ●              | Year-on-year reduction  |
| <b>Environmental Compliance</b>                           | Significant environmental incidents <sup>4</sup>                                      | Zero   | 1 (-66%) ●               | Zero in 2021  |
| <b>How We Operate</b>                                     |   |  |                          |   |
| <b>Ensuring Ethical Conduct</b>                           | Policy development and training   | Completion and roll out of IPL Modern Slavery Awareness training | Complete ●               | Anti-Bribery and Corruption training for all applicable employees in 2021 |
| <b>Ensuring a Talented, Engaged and Diverse Workplace</b> |   |  |                          |   |
| <b>Gender Diversity</b>                                   | % females in our global workforce   | Year-on-year increase  | 17.6% ●                  | 25% by 2022   |
| <b>Engaging our employees</b>                             | Employee engagement scores  | Meaningful year-on-year improvement                              | ●                        | Global Employee Survey 2022   |
| <b>Managing the Impacts of Climate Change</b>             |   |  |                          |   |
| <b>TCFD Alignment</b>                                     | IPL TCFD Roadmap: Governance & Strategy actions                                       | A\$2.7 million solar hydrogen feasibility study                  | Complete ●               | Refresh of future climate related scenario analyses in 2021               |
| <b>Resource Efficiency and Emissions</b>                  |   |  |                          |   |
| <b>GHG emissions</b>                                      | tCO2e per t ammonia produced  | 2.0  | 1.90 (-10% since 2015) ● | 5% absolute GHG reduction by 2026 against 2020 baseline <sup>5</sup>      |
| <b>NOx emissions</b>                                      | tNOx per t nitric acid produced   | 0.002 (-36% since 2015)  | 0.002 ●                  | 0.002 (-36% since 2015)   |
| <b>Water use</b>  | Groundwater extraction at our Phosphate Hill ammonia facility                         | 5% reduction on 2019 extraction                                  | 2% ●                     | 25% reduction in Australian municipal water use by 2023                   |
| <b>Sustainable Products and Services</b>                  |   |  |                          |   |
| <b>Product Quality</b>                                    | % fertiliser sales compensation due to quality issues                                 | Less than 0.1%   | 0.04% ●                  | Less than 0.1%  |
|   | Global Explosives Initiating Systems Manufacturing quality 'Escape Rate' <sup>6</sup> | Less than 1  | 0.03 ●                   | Less than 1   |
| <b>Caring for our Communities</b>                         |   |  |                          |   |
| <b>Community Safety</b>                                   | Compliance with required Community Safety Communications                              | 100%   | 100% ●                   | 100%  |

- Total Recordable Injury Frequency Rate: the number of recordable incidents per 200,000 hours worked, including contractors.
- Incidents with potential consequences of 5 or higher on a 6-level scale (excluding near misses and hazards).
- Tier 1 and Tier 2 Process Safety Incidents as defined by the Center for Chemical Process Safety.
- Environmental Incidents as assessed against IPL's internal risk matrix with actual consequences of 5 or higher on a 6-level scale. A category 5 environmental incident is 'a major event or Environmental repeat non-compliance with regulatory, licence or

- permit conditions leading to prosecution or restriction of operations' and a Category 6 environmental incident is one which results in 'permanent or long-term impacts to water, land, biodiversity, air or ecosystems and requires significant remediation, rectification or investment in mitigation'.
- IPL's total global 2020 emissions were 3,616,740 tCO2e. The 2020 GHG baseline is subject to adjustment due to unforeseen future expansions and acquisitions or divestments which may occur before the end of the 2026 IPL financial year.
- The Global Explosives Initiating Systems Manufacturing quality 'Escape Rate' is calculated as ((Total 'Escaped' Defects / Total Production) x 1,000,000). Total 'Escaped' defects are IS units not meeting our high standards of quality control.

# HOW WE OPERATE

## 2020 Highlights



**Competition Law training for applicable employees**



**Development and roll out of the online IPL Modern Slavery awareness training module**



**Review of Board and Committee Charters for compliance with ASX Corporate Governance Council's Principles and Recommendations 4th Edition**



We are committed to operating to the highest standards of ethical behaviour and honesty, with full regard for the health and safety of our employees, customers, the wider community and the environment.

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 IPL and its shareholders, as well as other stakeholders such as employees, customers and the community, in a manner designed to create and continue to build sustainable value.

The Board operates in accordance with its Board Charter, which sets out the Board's responsibilities and the matters it has reserved for its own consideration and decision-making. To assist the Board in meeting its responsibilities, the Board currently has the following four standing Committees:

- the Audit and Risk Management Committee;
- the Nominations Committee;
- the Remuneration Committee; and
- the Health, Safety, Environment and Community Committee.

The Board has delegated the day-to-day management of IPL, and the implementation of approved business plans and corporate strategies, to the Managing Director & CEO, who in turn may further delegate to senior management. IPL's governance framework:

- plays an integral role in helping the business deliver on its strategy;
- provides structure through which the strategy and business objectives are set, performance is monitored, and risks are managed;
- provides guidance on the standards of behaviour that IPL expects of people; and
- aligns the flow of information and accountability from our people, through the management levels, to the Board and ultimately our shareholders and key stakeholders.

## KEY POLICIES

As part of our commitment to operating to the highest standards of ethical behaviour, we have a range of policies and systems that set ethical standards for directors, senior management and employees. These policies describe core principles designed to ensure ethical conduct is maintained in the interests of shareholders and other stakeholders. The following policies or summaries are available for download on our [Corporate Governance](#) webpage:

- The **IPL Code of Conduct** sets out the Company's global code for business conduct. It contains principles and standards of conduct which are based on the Company's values and represents the Company's commitment to uphold ethical business practices and meet applicable legal requirements. The Code applies to all directors, officers and employees of the Company and each subsidiary, partnership, venture

and business association including agents and other contractors that are effectively controlled by the Company or act on its behalf.

- The **IPL Health, Safety, Environment & Community Policy** sets out our commitment to our Values of "Zero Harm for Everyone Everywhere" and "Care for the Community and our Environment".

- The **IPL Climate Change Policy** sets out IPL's commitment to the Paris Agreement and describes how our core Strategic Drivers are being leveraged to manage the challenges of climate change. Read more under [Managing the Impacts of Climate Change](#) on page 22.

- The **IPL Human Rights Policy** articulates the fundamental elements of the Group's approach to human rights and how the Group demonstrates its commitment to respect human rights in line with the Universal Declaration of Human Rights and other international frameworks.

- The **IPL Modern Slavery Policy** was published in December 2019 and defines the processes that identify and address modern slavery risks in IPL's supply chains and operations. During 2019, the [IPL Supplier Code of Conduct](#) was also published and a set of tools and procedures was developed to enable the identification and mitigation of any risks associated with human rights in the IPL supply chain. During 2020 the IPL Modern Slavery awareness training module was developed and rolled out to our procurement teams. Our first Modern Slavery Statement will be published in 2021.

- The **IPL Anti-Bribery and Improper Payments Policy** prohibits the making of unlawful or improper payments to any individual or entity and outlines the processes for ensuring that appropriate controls are implemented in relation to third parties who are engaged to act on our behalf. The policy forms part of, and is supported by, the Fraud and Corruption Control framework and a mandatory online Fraud & Corruption training course is delivered through IPL's Learning and Development Platform.

- The **IPL Sanctions Policy** outlines the expected standards of conduct relevant to the Group's compliance with Australian and international sanctions laws when engaging in international trade. This includes engagement in appropriate due diligence in relation to third parties, transactions or activities that present a potential risk in relation to sanctions laws compliance.

- Our dedicated **Global Conflict of Interest for Personnel Policy** aims to ensure employees and full-time contractors understand the key principles regarding conflicts of interest and, in particular, are able to identify circumstances which may give rise to a conflict of interest and understand the processes to disclose and manage conflicts of interest.

## OUR VALUES

Our Company values are at the core of the way we work, and our people are fundamental to the way we work. With a One Team mindset and behaviours, coupled with cross functional and geographical collaboration across our functions and businesses, we are able to capture diversity of thought in an inclusive environment where the contribution of everyone is valued.



Care for the Community & our Environment



Think Customer. Everyone. Every day.



Treat the Business as our Own



Value People - Respect, Recognise & Reward



Zero Harm for Everyone Everywhere



Challenge & Improve the Status Quo



Deliver on our Promises

- The **IPL Group Risk Policy** and Risk Management Framework ensures that risk is managed within a comprehensive risk management process which is consistent with the Australian/New Zealand Standard for Risk Management (AS/NZS ISO 31000:2009). A key element of this risk management process is the Board's assessment of risk, which is based on the level of risk we are prepared to sustain in achieving the corporate objective of delivering value to shareholders. Risks are identified, analysed and prioritised using common methodologies and risk controls are designed and implemented having regard to the overall corporate strategy. To help ensure quality and consistency in the identification, assessment, documentation, management and reporting of risk, a complete risk management document suite is available to all employees via the company's intranet. The document suite is further supported by comprehensive training programs that are tailored to specific employees' needs and delivered via on-line media and face-to-face workshops.

- The **IPL Sustainable Communities Policy** includes our commitment to listen to and work with the community, strive to be a valued corporate citizen in the communities where we operate; and respect our neighbours, their values and cultural heritage and be considerate to them in carrying out our operations.

- The **IPL Diversity Policy** outlines our commitment to being an inclusive and accessible organisation through the development of a culture that embraces diversity. Our Board of Directors maintains oversight of the Diversity Policy and the implementation of the Diversity Strategy.

- The **IPL Whistleblower Protection Policy** applies to all businesses of IPL globally. In some countries where we operate, local laws impose specific obligations and protections in relation to whistleblowers. In [Australia, the Whistleblower Protection Policy](#) is consistent with Australian Standard AS 8004. The global Whistleblower process ensures that all staff can confidentially report improper, unethical or illegal conduct and raise concerns regarding actual or suspected contraventions of ethical or legal standards, without fear of victimisation, reprisal or harassment. The externally managed worldwide service is multi-lingual, confidential and designed to efficiently facilitate the resolution of business conduct queries and/or issues that staff feel they are unable to raise and resolve locally. The service can take calls in all our major operating languages, being English, French, Spanish, Chinese, Turkish and Bahasa, and provides our staff with multiple lines of communication and the opportunity to provide further information, or respond to requests for further information, whilst remaining anonymous.

- The **IPL Information Security Framework** ensures procedures and training are in place to protect our global information network. Implementation of the Framework is governed by the Audit and Risk Management Committee of the Board and managed by our Chief Information Officer (CIO) who is a member of the IPL Executive team.

- Our annual **Tax Transparency Reports** outline our Board approved strategy with regards to tax and reflect IPL's ongoing commitment to tax transparency.



# ZERO HARM

## 2020 Highlights



Keeping our people safe through our proactive response to the COVID-19 pandemic

29% Reduction in TRIFR, achieving our 2021 target of 0.70 a year early

27% Reduction in Tier 1 and Tier 2 Process Safety Incidents

66% Reduction in Significant Environmental Incidents



Implementation of leading practice environmental controls at our Townsville Primary Distribution Centre



Our ambition is to achieve industry leading performance in occupational health, safety, process safety and environmental compliance.

## OUR APPROACH

Zero Harm is one of the six strategic drivers that underpin the success of IPL. Last year, IPL consulted widely across all levels of the organisation and, as One IPL, refreshed our approach to deliver the Zero Harm Ambition developed in 2018. Our refreshed strategy creates a strong connection to the Zero Harm Strategic Driver, and integrates all HSEC elements under one framework.

The strategic themes of Simplify, Get the Fundamentals Right, Lead and Engage and Strengthen our Learning Culture provide a common language and basic principles which guide our effort, reflect the voice of our employees and improve our performance.

Our 3-year tactical plan targets the delivery of global Zero Harm initiatives, and Global Collaboration Networks have been created to focus on specific Health, Safety, Process Safety and Environment continuous improvement plans. Actions in 2020 and those planned for 2021 are presented on the opposite page and our Zero Harm performance is reported on page 17.

The Company's ambition to achieve industry leading performance in occupational health and safety, process safety and environment, is supported by IPL's integrated [Health, Safety, Environment and Community Management System \(HSECMS\)](#) which provides the foundation for effective identification and management of Health, Safety and Environmental (HSE) risks. The management system includes 18 global standards and is a key tool underpinning safety performance at all levels and across all functions.

These standards are aligned to ISO14001, OHSAS 18001, ISO 31000 and AS 4801 international standards, as well as American Chemistry Council Responsible Care Management System and Center for Chemical Process Safety.

To monitor our HSE performance, we use a global HSE reporting system called Cintellate. Incident reporting and analysis is key to our ability to continuously improve HSE practices. By recording and investigating incidents and 'near misses' to establish the root causes – be they injury or environmental, process safety or quality related events– we gain valuable insights into the hazards faced by our people and communicate these learnings across all of our sites. A risk register template is included in Cintellate, which provides a uniform approach to risk ranking, management and reporting across the business.

## Zero Harm governance

We have a governance structure in place to ensure a strong Zero Harm focus across the organisation. Data extracted from Cintellate is reported to the Board and Executive Team regularly. The Board's Health, Safety, Environment and Community (HSEC) Committee assists the Board in its oversight of health, safety and environment matters arising out of our activities as they may affect employees, contractors, and the local communities in which we operate.

The Vice President Health, Safety and Environment is accountable for advising the Managing Director & CEO and Executive Team on best practice strategies for health, safety and environmental improvement. This role supports our organisation in developing and delivering the Zero Harm strategy and works with a Group-wide network of safety and environmental professionals, as well as operational leaders, to achieve our goals and support line management in improving our performance.

Regional safety professionals provide advice and support to line management by sharing best practices, and standardising, simplifying, coaching and coordinating health and safety activities across the Group. 100% of our workers and contractors are represented in formal joint management-worker health and safety committees which operate at a site based level in the organisation. At large sites, these may also operate at a plant level.

The Zero Harm Council (ZHC), chaired by our Managing Director & CEO and consisting of all members of the Executive Team and the Vice President Health, Safety & Environment, is accountable for overseeing the Group's execution of the Zero Harm Strategy and reviewing health, safety and environmental performance.

On a day-to-day operational level, our leaders are expected to consistently demonstrate and communicate high standards of behaviour and operating discipline and promotion of our Zero Harm Value. They must take proactive action to continuously improve our safety performance and use both leading and lagging indicators to monitor that performance.

Personal responsibility at all levels is integral to promoting continuous health and safety improvement across the Group. We lead, engage, empower and develop, and expect everyone to be leaders in Zero Harm. We are embedding this culture through specific training, and supplementing this with the use of techniques such as safety observations, and incident and near miss investigations to share learnings.

## Zero Harm Strategic Themes

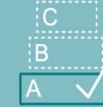
### Simplify

We support people with easy to understand and easy to use systems.



### Get the Fundamentals Right

We define our minimum expectations: we will be excellent at the fundamentals.



### Lead and Engage

We empower, develop and expect everyone to be leaders in Zero Harm.



### Strengthen our Learning Culture

We learn, we share and we fix for good.



## ACTIONS IN 2020

- Developed a refreshed and engaging Zero Harm strategy roll out with a clear connection to our Zero Harm Strategic Driver and why each of us share our ambition of Zero Harm.
- Commented a design review of the One IPL Operations Management System.
- Successful completion of the Operations Risk Management pilot at Phosphate Hill to develop a simplified process for the management of HSE risks.
- Improved work instructions to simplify and clarify the requirements of environmental permits, licenses and regulations.

- Developed global standards to set minimum expectations for management of our highest consequence risks, including fatigue.
- Established metrics and governance processes to embed management of change processes in the organisation.
- Reviewed and improved manual handling practices.
- Completion of Ammonium Nitrate/Calcium Ammonium Nitrate assurance on processes to manage risk associated with handling AN and CAN.
- Continued focus on environmental compliance across the organisation through automation, increased controls and improved practices.

- Established Global Functional Collaboration Networks to co-create shared solutions for common HSE hazards and issues.
- Developed & implemented COVID-19 systems & procedures, including Telemedical consultation, welfare checks and flu vaccinations.
- Implemented the ABC Mental Health & Wellbeing Campaign and 5 Week Challenge, supported by leader and workforce virtual workshops.
- Targeted key sites for assessment of the risk of environmental noncompliance and improved management and mitigation programs where potential risks were identified.

- Developed the refreshed IPL Global Safety Behavioural training program.
- Communication of the refreshed and redefined Zero Harm Strategy.
- Development of the IPL Rules To Live By Guide.
- Implementation of the refreshed Event Management process.
- Continued focus on improving environmental awareness through training, with emphasis on loss of containment, spill prevention, site cleaning processes and stormwater pollution prevention.

## FOCUS IN 2021

- Utilising learnings from the FY20 Operations Risk Management pilot to develop a Global Manufacturing Operations Risk Management process.
- Integrating HSEC Assurance and Governance activities throughout the global business.
- Simplification of HSEC systems and tools.
- Transitioning of all compliance management requirements to our global online systems platform.
- Improving site demonstration of environmental permit obligations through simplification and clarification.
- Standardisation of environmental expectations and practices.

- Implementation of revised Take 5 personal risk assessment.
- Identifying Organisational Factors in Event Investigation.
- Global Occupational Hygiene procedure implementation.
- Commence monitoring of an Explosives Safety Metric.
- Implementation of improved Transportation Standards for heavy vehicles.
- Improved Fatigue Management procedure implementation.
- Improved Manual Handling Program implementation.
- Increase visibility and ownership of Environmental Compliance Management through improved automation, systems and practices, as well as continued awareness training.

- Continuing our COVID-19 pandemic response and management plan.
- Implementing refreshed SafeTEAM's Training content to link explicitly to our Zero Harm Strategic Driver and our refreshed Zero Harm Strategy.
- Reviewing and consolidating Safety Leadership programs.
- Standardising our group wide Health and Wellbeing Program development and implementation.
- Continued focus on key sites for risk of environmental noncompliance.
- Continued planning for changes to environmental legislation in VIC and QLD, Australia.

- Creating an environment to optimise HSEC Learning from High Consequence Events.
- Rolling out the IPL Rules To Live By Guide.
- Improving event investigation, review and action closeout procedures.
- Facilitating shared learnings from environmental performance improvements.
- Developing a dashboard to visually communicate environmental compliance status of sites.

## ZERO HARM

### Zero Harm learning culture

During 2020, we refreshed our global behavioural safety training program. Our current program is based on the concept of how people think, which invariably impacts on what they do. By giving attention to individual attitudes and behaviours we are able to influence the results we achieve on and off the job. This approach aims to influence attitudes and culture around safety and has built a solid foundation of personal safety within the business.

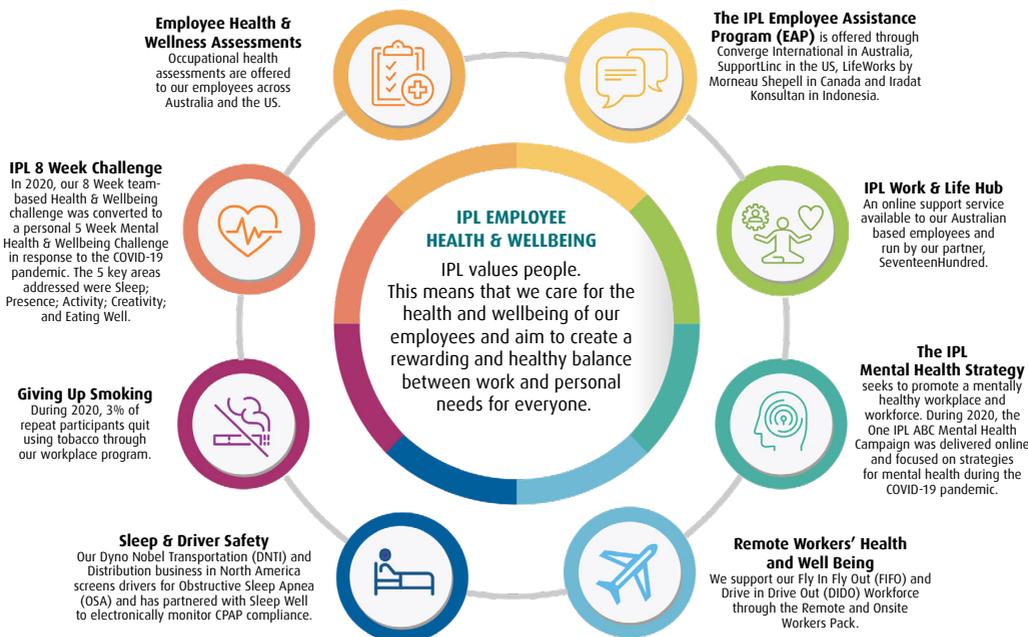
In 2021, we will transition our global behavioural safety training program to 'SafeTeams'. The refreshed approach will ensure a seamless transition from the current program and integrates more contemporary HSEC mindsets and leadership concepts. In addition to embedding tools to ensure the right skill set to deliver learning outcomes, SafeTeams aims to move from a personal focus to include a collective team focus. The program has strong practical skill building concepts, ensuring learning & capability are transferred to daily conversations and actions.

The training program will move to a single full-day format and incorporates a blended delivery model with flexibility to utilise internal or external facilitators and to deliver some components as online learning. The OneIPL approach will continue to create a common language around IPL's Zero Harm culture.

Employees also receive safety and environmental training as part of their induction process, which is compulsory for all new employees (including contractors whose duration of engagement exceeds 40 hours). Our 'safety non-negotiables' as described in the 'Rules to Live By' are clearly communicated at induction and reinforced by managers. We also use the '5S' approach to workplace efficiency. 5S is a workplace organisation method which uses 5 systematic procedures to allow the identification and removal of safety and environmental hazards.

### HEALTH AND WELLBEING

The IPL Zero Harm Council has responsibility for employee health across the Group and each business unit and site offers health and wellbeing



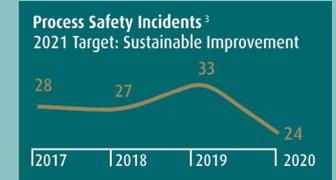
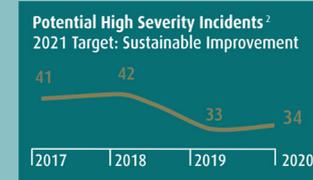
programs appropriate for local needs and to suit local regulatory and cultural requirements.

The IPL Employee Assistance Program (EAP) provides a number of confidential specialist counselling sessions each year, and is available 24 hours per day, offering support for work and personal issues either face-to-face, over the telephone, online or via a mobile phone app. Counselling and tip sheets offered can help with managing conflict, coping with change, stress, grief, career transitions, relationship issues, gambling, alcohol and substance abuse, parenting conflict, pain, trauma, anxiety, depression and many types of emotional difficulties.

The IPL Mental Health Strategy seeks to promote a mentally healthy workforce at IPL. A key element of the program is to increase the awareness of mental health, its effects at work and how to seek help. The potential impact of the COVID-19 pandemic on employees' mental health was identified early in 2020 and more than 60 online mental health sessions were conducted, reaching across our global operations with a significant number of employees attending. The first global IPL Mental Health and Wellbeing 5 Week Challenge was also delivered and focused on incorporating the ABC's for Mental Health and Wellbeing into daily activities. To encourage connecting and sharing between participants on our internal social networking platform, each '#beconnected' post was recognised with a \$2 donation to the IPL COVID-19 Solidarity Response Fund.

**Sleep and driver safety:** Our North American Driver Alertness Program screens our drivers for Obstructive Sleep Apnoea (OSA), and those who are diagnosed are assisted to access treatment to improve their sleep. As with all of our drivers, determination for fitness for driving is made by the Department of Transport doctor. In the case of OSA, doctors confirm Continuous Positive Airway Pressure (CPAP) treatment compliance and monitor progress before issuing drivers with a medical card to drive. Dyno Nobel Transportation has partnered with Sleep Well to electronically monitor CPAP therapy compliance where required. In Australia, 'fitness for driving' medical assessments are conducted as part of the requirements for Dangerous Goods Drivers' licencing.

## Zero Harm Performance



In 2018, we set a goal for a step change in our workforce Total Recordable Injury Frequency Rate (TRIFR) to achieve a 30% reduction by 2021. This focus has resulted in us achieving our 2021 target of 0.70 a year early – with an FY20 TRIFR of 0.57. We've also seen a significant improvement in process safety incidents, down to 24 compared to 33 last year.

Tragically, a multi-motor vehicle accident in April on a public road in South Carolina resulted in two fatalities and one serious injury, including the death of one of our employees. The tragic loss of life is a stark reminder of the importance of embedding Zero Harm as our number one value and priority.

### MANAGING ENVIRONMENTAL IMPACTS

We are subject to environmental regulation under the jurisdiction of the countries in which we operate including Australia, United States of America, Mexico, Chile, Canada, Indonesia, Papua New Guinea and Turkey. These environmental laws and regulations generally address the potential aspects and impacts of our activities in relation to, among other things, air and noise quality, soil, water, biodiversity and wildlife. In certain jurisdictions, the Group holds licences for some of our operations and activities from the relevant environmental regulator. We measure our compliance with such licences and report statutory non-compliances as required.

In accordance with Standard 16 of the IPL Global Health, Safety and Environment Management System, all incidents, including near misses, are reported immediately to the Manager of the Site and elevated to Senior

Leadership, Legal and/or external authorities based on the event potential consequence and outcome. All incidents are recorded and investigated according to the IPL Incident Reporting, Investigation and Root Cause Analysis Procedure. Incident investigations identify and prioritise corrective and preventative actions, in order to eliminate or reduce the risk of the incident recurring.

During the 2020 financial year, a prosecution was recorded in relation to an acid spill at our Phosphate Hill site in 2018. As a result of the prosecution, a fine of \$45,000 and \$3,664 in costs was paid. This event was fully investigated and the site has since installed additional equipment, including density meters and shut off valves associated with the containment bunds where acid is unloaded. Additional CCTV equipment and an electrical leak detection system will also be installed, once parts are received.

During 2020, we also invested \$4.5m in leading practice environmental controls at

Our TRIFR reporting includes employees and contractors unless otherwise stated. TRIFR for employees and contractors, as well as by region and by gender is reported on page 9 of the [2020 IPL GRI Index and Data](#) supplement to this report.

1. TRIFR is the number of recordable incidents per 200,000 hours worked and includes contractors. TRIFR results are subject to finalisation of the classification of any pending incidents.
2. Incidents with potential consequences of 5 or higher on a 6-level scale (excluding near misses and hazards).
3. Tier 1 and Tier 2 Process Safety Incidents as defined by the Center for Chemical Process Safety.

our Townsville PDC to minimise the risks of fertiliser nutrients impacting on the local environment. See our [2020 Sustainability Summary](#) for more details.

As part of our Zero Harm strategy, a process to move to a more proactive and rigorous demonstration of compliance to environmental licence and permit obligations is being implemented in 2021. Environmental compliance is recognised across the business as a non-negotiable.



## Keeping our People Safe in a Global Pandemic

Our response to COVID-19 in 2020 was focused on the health, safety and mental wellbeing of our people while ensuring business continuity to safeguard our services to customers around the world. Our response included a number of initiatives that we were able to develop and implement quickly and efficiently:

- COVIDSafe plans across our sites, offices and workplaces.
- Mobilising rapid on-site COVID-19 testing where high risks of community transfer emerge.
- Close collaboration with the Chief Medical Officer and health officials in countries where we operate.
- Digital working from home platform and collaboration forum for people new to working from home.
- A wide range of mental health campaigns to support our people and their families including:
  - The One IPL ABC (Activate, Connect & Calm) Mental Health Campaign with global virtual mental health sessions for the workforce and family members who wished to participate and separate programs for leaders.
  - Mental health workshops and care packs for employees experiencing extended periods of lockdown.

- Ⓐctivate a daily routine
- Ⓑe connected
- Ⓒalm the mind



# RESOURCE EFFICIENCY & EMISSIONS

## 2020 Highlights

- 10%** reduction in GHG per tonne ammonia produced against a 2015 baseline
- 36%** reduction in NOx per tonne nitric acid produced against a 2015 baseline
-  **Setting our first absolute GHG reduction target of 5% by 2026 against 2020 GHG<sup>1</sup>**
-  **Setting an Australian municipal water reduction target of 25% by 2023 against 2020 Australian municipal water use**
- \$2.7 MILLION** feasibility study completed to assess the potential of renewable hydrogen for ammonia manufacture



We focus on resource efficiency, abatement opportunities & exploring new technologies, such as solar hydrogen, to reduce our impacts.

Our [Health, Safety, Environment and Community \(HSEC\) Policy](#) states that we will promote the efficient use of resources and energy and strive to minimise our impact on the environment. This commitment is enacted on a day-to-day basis through Standard 11 of our [HSEC Management System](#).

Our consumption of resources, such as natural gas, electricity and water and the amount of greenhouse gas (GHG) emissions we produce is representative of the scale and capacity of our manufacturing plants, in particular the energy-intensive manufacture of ammonia-derived products, including urea, ammonium sulphate, ammonium phosphate and ammonium nitrate for the fertiliser and explosives markets. All of these products require natural gas as both an energy source and a raw material for production, with carbon dioxide being liberated during the process. In addition, carbon dioxide is liberated during the acidulation of phosphate rock in the manufacture of phosphate fertilisers, and nitrogen oxides (NOx) and nitrous oxide (N2O, a potent GHG) are released during the production of nitric acid.

In Australia, a central reporting system collects energy use, water use and waste data from all manned sites. The data is obtained from utility bills, except where electricity is generated on site. Electricity generated from natural gas at remote sites is metered on site and this is also entered into the database. Municipal water use is obtained from water bills, whereas volumes for storm water, river water, recycled process water or ground water are typically metered on site. The data is then consolidated and verified for reporting purposes. Energy use, water use and waste data for our sites in North America and Europe are supplied separately.

### ENERGY USE & GHG

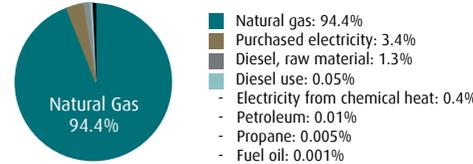
IPL used 66,383,873 gigajoules (GJ) of energy over the past year, 2,063,598 of which (3.4%) was purchased electricity. This is a 10% increase on last year's energy use and is due to increased production, including a 14% increase in ammonia production globally.

Approximately 80% of our purchased electricity (indirect energy) was generated from non-renewable sources, with 20% generated from renewable resources, made up mostly of hydroelectricity. Natural gas and diesel amounts used as raw materials and on-sold in our products have been included in our energy use figure.

Approximately 1.3 percent of our direct energy is from CO2e-free sources, which includes electricity that is generated from heat captured during the manufacture of sulphuric acid.

Natural gas prices in Australia have increased sharply in recent years and we continue to advocate that gas exports do not come at the expense of an adequate local supply.

### Energy sources in 2020



### GREENHOUSE GAS EMISSIONS

Our recorded Scope 1 (direct operational) and 2 (indirect operational) absolute GHG emissions increased by 7% to 3,616,740 tonnes of carbon dioxide equivalent (CO2e) in 2020. The total figure comprises 3,319,456 tonnes of Scope 1 (direct) emissions and 297,324 tonnes of Scope 2 (indirect) emissions.

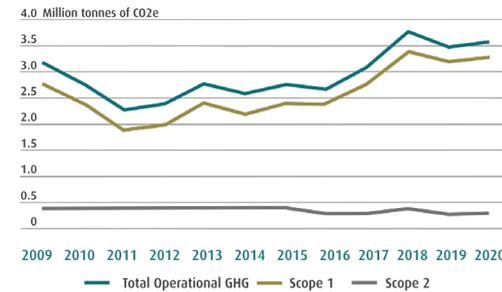
The 7% increase in our Scope 1 and 2 emissions was due to increased production, including a 14% increase in ammonia production globally. As described above, the production of our essential agricultural, mining and quarrying products is currently based on a hard-to-abate chemical process, however, we continue to invest in abatement technologies and seek new ways to reduce our GHG. See [Managing the impacts of climate change](#) for more detail on our strategy.

As in previous years, a third party was engaged to provide an assurance opinion over our Australian Scope 1 and 2 GHG emissions, energy consumption and production figures for the period 1 July 2019 to 30 June 2020, with the third party issuing an [unqualified opinion](#).

Our Scope 3 (value chain) emissions were calculated as 5,894,323 tCO2e, which is similar to last year. Our Scope 3 emissions inventory accounts not only for the emissions associated with our sourcing of natural gas, ammonia, ammonium nitrate and other material purchases from third parties, but also the emissions arising from the use of the products we sell to customers, and those associated with our global shipping, water use and waste.

1. The 2020 GHG baseline is subject to adjustment due to unforeseen future expansions & acquisitions or divestments which may occur before the end of the 2026 IPL financial year.

### Direct and indirect (Scope 1&2) operational GHG emissions



### GHG intensity (tCO2e) per tonne of ammonia produced



### Improving our performance

In line with our focus on resource efficiency and abatement opportunities, which is integrated into our Manufacturing Excellence Strategy, we continue to investigate and implement ways to reduce our energy use as well as our emissions. We have reduced our global GHG emissions intensity per tonne of ammonia by 4% since last year, and by 10% since 2015 through energy efficiency projects and investment in a new US\$820m highly efficient ammonia plant.

In 2020, we set an absolute medium-term GHG reduction target of 5% by 2026, which is approximately 200,000 tCO2e. This reduction is equivalent to the emissions generated by 43,209 average passenger vehicles being driven for a year. Meeting this target will require significant financial investment and signals a shift in focus towards identifying longer term pathways to more significant emissions reductions. New technologies, such as solar hydrogen, will be required to achieve these greater GHG reductions in the long-term, and we continue to investigate these emerging pathways. Read about the \$2.7m Solar Hydrogen Feasibility Study completed this year in [Managing the impacts of climate change](#).

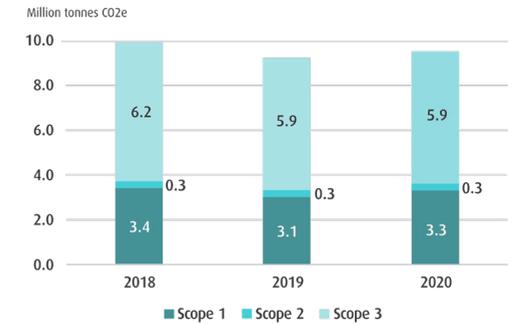
As we seek pathways to longer term reductions, we continue to invest in opportunities to provide incremental reductions in the short term. During 2020, we investigated fuel cells and implemented a range of process optimisations, equipment replacements and steam & energy surveys to reduce our energy use and GHG.

At Moranbah, Queensland a project to preheat deaerator feedwater with process heat previously lost to the atmosphere has saved more than 214,000 GJ of natural gas, reduced GHG emissions by over 20,000 tCO2e and reduced costs by over \$2m since its implementation in 2018. It has also qualified to generate Australian Carbon Credit Units (ACCUs).

Last year our Moranbah site invested \$4 million in the fabrication and installation of new equipment and \$1.8 million in GHG abatement catalyst replacement to reduce emissions of N2O, a GHG, associated with nitric acid manufacture. In 2020, this reduced our Scope 1 GHG emissions by an estimated 540,568 tCO2e.

During 2020, IPL's Waggaman, Louisiana ammonia plant captured 86,305 tCO2 for use by a neighbouring melamine manufacturing plant, avoiding the release of these GHG emissions to air.

### Value chain (Scope 3) GHG emissions in relation to operational (Scope 1 & 2) GHG emissions



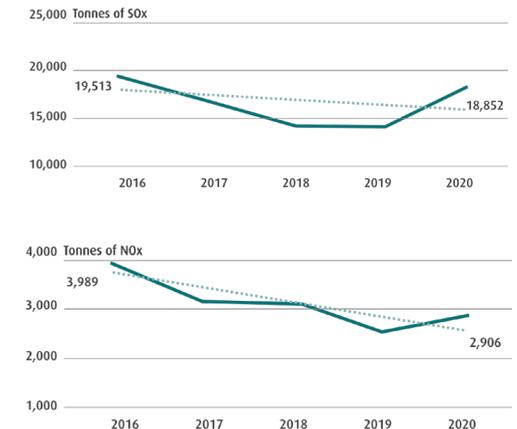
1. Our Scope 3 emissions inventory accounts not only for the emissions associated with our upstream sourcing of natural gas, ammonia, ammonium nitrate and other material purchases from third parties, but also the emissions arising from the use of products we sell to customers, and those associated with our global shipping, water use and waste. See 'Scope 3 GHG Calculation Methodology' in [GRI Index and Data](#).

### NOx & SOx EMISSIONS

IPL also continued to invest in the ongoing maintenance of abatement technology which captures, treats and so reduces process emissions to air. Nitrogen oxides (NO2 and NO, referred to collectively as NOx) are released when fuels are burned at high temperatures, and when nitric acid is manufactured. As of 2016, all of our nitric acid manufacturing sites have NOx abatement units installed. Sulphur oxides (SO, SO2, SO3, referred to collectively as SOx) are emitted when fossil fuels are combusted, and in the making of sulphuric acid.

This year our operations emitted 2,906 tonnes of NOx and 18,852 tonnes of SOx. Although not greenhouse gases, NOx and SOx have other environmental impacts, such as air pollution. We are committed to reducing emissions of NOx and SOx across our global manufacturing sites. Minor variations between emissions from year to year in the graphs below are due to the varying ages of the catalysts in use.

### Total global NOx and SOx emissions



## RESOURCE EFFICIENCY & EMISSIONS

### WATER

Cooling water is a key necessity for our ammonia manufacturing process and the majority of our water use is either for single pass cooling or as recycled cooling water. A small percentage is used for steam to power equipment and as an input for the chemical reaction that makes ammonia. The risks and opportunities associated with water management as it relates to climate change have been assessed and are described in our annual CDP Water Security reports.

In addition to IPL's comprehensive annual risk management process, the World Resources Institute (WRI) Aqueduct Water Tool is completed each year for long term projections and reviewed by the Chief Risk Officer. While the majority of IPL's manufacturing plants are located in regions with plentiful natural supplies of water, the WRI Water Tool analysis has identified several of our Australian sites and one in the South West of the United States as operating in regions where water conservation is a critical issue. Initiatives at these sites are outlined under 'Where Water is a Material Issue'. In other regions, where there is higher rainfall, we recognise that water management is also important.

#### Water use by source

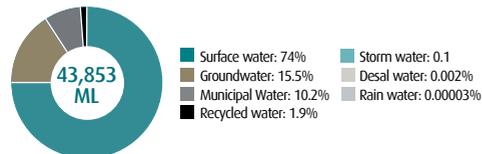
During 2020, we withdrew 43,853 ML (mega-litres) of water, a 4% decrease from last year. Our total reported water use includes the categories shown in the graph below. A large proportion of this water is used more than once within our plants, but most sites do not meter the recycling of cooling water. 820 ML of water was recycled and reused at sites which have meters. This represents 1.9% of our total withdrawal and 6% of our net water use.

#### Water discharge by destination

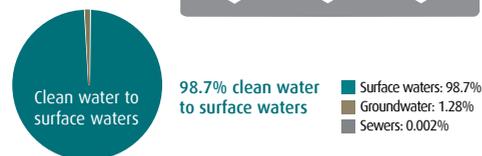
During 2020, we discharged 30,447,587 m3 of water to the environment. This total discharge excludes sewage, discharge of collected rainwater and waste water removed for treatment or disposal as liquid waste (which are included under 'Waste'). It includes some discharge of rainwater where runoff is collected and treated at several sites in North America, and therefore cannot be separately metered.

As shown in the graph, 98.7% of discharge was clean cooling water which was released to the natural waterways from which it was taken, reducing our net water use to 14,502 ML. We monitor the water quality of such discharges on an ongoing basis to meet local regulatory requirements and also seek to improve water quality beyond the standards required by licensing wherever possible.

#### Water Use by Source



#### Water discharge by destination



### Where Water Is A Material Issue

#### Cheyenne in Wyoming, USA

At our ammonia manufacturing site at Laramie County, Cheyenne, Wyoming, USA, water resources are of particular concern and management involves multiple stakeholders. The site is located in a semi-arid area which the WRI Water Tool has identified as an area of high baseline water stress<sup>1</sup>. Water for the site is drawn from an underground aquifer which is recharged each year by precipitation, including snowmelt. We engage with key stakeholders including the Wyoming State Engineer's Office (SEO) which manages stakeholder access to the aquifer and maintains databases for ground water levels, along with the Ground Water Division of the US Geological Survey, and our Cheyenne site monitors wells through totalizing flowmeters and water level measurements and reports to the SEO annually. Water saving initiatives at the site include:

- The monitoring and maintenance of steam traps and condensate systems to reduce water loss.
- Operation of a brine concentrator unit which recycles approximately 100 gallons of water per minute.
- A new reverse osmosis water treatment unit was purchased in 2020 with a total of 213,838 kL of waste water being recycled for reuse.
- Communication to personnel through daily reports to watch for, and prevent, excess water from running.
- Visual management board for water reduction projects and efforts.
- The position of Focused Improvement Engineer to implement an overall strategy of increasing the recycling of waste water streams and reducing waste water volumes.

#### Gibson Island in Queensland, Australia

Our Gibson Island site manufactures ammonia and urea and is located near the capital city of Brisbane. Although the WRI Tool identifies the site as being located in a catchment identified of 'low-to-medium' overall water risk, it is also identified as being subject to high baseline water stress<sup>1</sup> due to the larger local population and high inter-annual variability in rainfall.

We are currently working with Seqwater, the Queensland Government Bulk Water Supply Authority, and Urban Utilities, who operate a water recycling plant located near our site, to purchase recycled water for use at Gibson Island. During 2021, we aim to conclude an agreement and begin laying the pipeline to bring around 6,000 kL per day of recycled water into the site.

**This will leave 6 million litres of potable water in south-east Queensland dams every day for our local communities.**

#### Phosphate Hill in Queensland, Australia

Located in the Georgina Basin, our Phosphate Hill manufacturing site produces ammonium phosphate fertiliser in remote North West Queensland where a natural phosphate deposit is located. While the WRI Water Tool identifies this site as being at 'low-to-medium' overall water risk, it is identified as being in an area of high inter-annual variability of rainfall. To ensure supply, groundwater is drawn under licence from the phosphate orebody, which is porous and contains an aquifer called the Duchess Embayment Aquifer (DEA).

The many aquifers in the Georgina Basin are naturally recharged by rainfall during the summer wet season and were identified as a renewable (annually replenished) groundwater resource with high groundwater development potential (over 100GL/yr) by a recent inquiry into the development of northern Australia by the CSIRO. Although wet season rainfall varies annually, ongoing model prediction and quarterly monitoring conducted using 39 monitoring bores across the embayment indicate that adequate supply to the site is currently being maintained. In addition to monitoring for potential changes in

<sup>1</sup> The WRI Aqueduct Water Tool identifies 'Baseline water stress' by measuring the ratio of total annual water withdrawals to total available annual renewable supply, accounting for upstream consumptive use. Higher ratings indicate more competition among users, with 'High' being 40-80%.

the embayment, the Phosphate Hill site submits an annual Borefield Performance Report to the Queensland Government Department of Natural Resources and Mines (DNRM) each year in September and completes an Annual Aquifer Review in December each year.

Our Phosphate Hill site is committed to reducing water usage wherever possible through continuous improvements and water recycling strategies. These presently include multiple re-uses of cooling water (our major use) and reclamation of water from waste gypsum stacks, as well as the reuse of process water to allow both the recapture of phosphates and the reduction of fresh groundwater extraction.

#### Geelong in Victoria, Australia

The Geelong site manufactures single super phosphate fertilisers, a process which requires much less water than ammonia manufacture. However, the site has been identified by the WRI Water Tool as being in a water catchment subject to high baseline water stress<sup>1</sup> and of medium-to-high risk regarding overall water risk. The site obtains its water from the state government-managed Barwon Region Water Corporation, Victoria's largest regional urban water management body. Barwon water is predominantly sourced from forested catchments on the upper Barwon and Moorabool rivers, but during periods of prolonged drought water is sourced from underground aquifers via the Barwon Downs and Anglesea bore fields. In extreme drought, the water management body can also access supply from the water grid of the City of Melbourne via the Melbourne to Geelong Pipeline, a 59-kilometre underground pipeline which is part of the state's long-term plan to secure the region's water supply into the future.

Water saving strategies at the site include the on-site capture, treatment and reuse of large volumes of stormwater, with 28,985 kL being treated and re-used in 2020. The site recently completed a site wide water balance to identify potential water savings and opportunities to better manage waste water and stormwater. This project initiated the use of rainfall prediction models at the site to more closely manage levels and capacities of water storage ponds. The collection of rooftop rainwater has been identified as an option to reduce reliance on municipal water supplies and increase the amount of stormwater collected and recycled. While delayed in 2020, this will be further investigated in 2021.

#### Mt Isa in Queensland, Australia

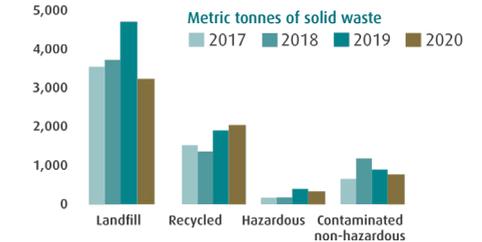
With an estimated population of 22,000, the mining town of Mount Isa is the administrative, commercial and industrial centre for the state's vast north-western region. Our Mt Isa site manufactures sulphuric acid using waste sulphur obtained from a nearby metal ore smelter. This process also uses less water than ammonia manufacture, however steam is also used at the site in the process of generating electricity from waste heat captured from the sulphuric acid making process.

Water for the site is obtained through the Mount Isa Water Board which is responsible for the sustainable management of water supplies in the region. Although identified by the WRI Water Tool as being located in a catchment where overall water risk is 'low-to-medium' and baseline water stress is 'low' (due to the small population), it is also identified as an area of extremely high inter-annual variability, and the local Water Board manages supply using two man-made Lakes. Water is drawn mostly from Lake Moondarra (owned by a metal ore mining company, but transported by the Mt Isa Water Board) 13 kilometres downstream of Mt Isa, and pumped 60km up from Lake Julius in times of extreme drought to ensure supply is maintained. Water saving strategies at the site include the condensing of all steam used in our on-site electricity generation turbine and the returning of any blow down water from our cooling towers to the nearby metal ore mine as process water. While total rainfall is expected to increase across the north of Australia due to climate change, our risk bowtie analysis to manage climate related issues at the site identified that pre-emptive actions to secure access to water in advance of potential future water restrictions should be investigated and implemented as a control.

### WASTE

#### Solid waste by destination

This year our sites generated 6,290 tonnes of solid waste, 22% less than in 2019. This decrease is due to several large maintenance shutdowns last year. 31% of our solid waste, 1,956 tonnes, was sent for recycling. Our global waste to landfill has declined by 31% since last year and we recycled 3% more solid waste. In 2020, approximately 5% of our solid waste was classified as hazardous and is mostly waste from the manufacture of our explosives products. In the Americas, 14,567 tonnes of ammonium nitrate that was unsuitable for use in explosives manufacturing was converted to fertiliser and sold to local farmers as either a nitrogen rich liquid fertiliser, or a low grade solid fertiliser.

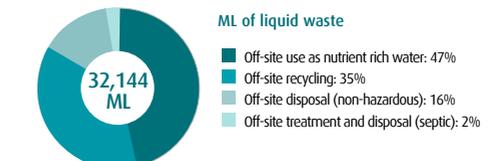


#### Solid chemical waste

Our sites generated 2,758,595 tonnes of solid chemical waste this year, a 54% increase from last year. This is directly due to increased production at our phosphate Hill site, which increased the phosphogypsum chemical waste that is stockpiled at our site in Phosphate Hill, Queensland, Australia. This waste makes up more than 99% of our chemical waste and is considered hazardous because of its low pH. Water and phosphate are currently being reclaimed from this material and it is planned that these stockpiles will ultimately be capped and re-vegetated. The other 293 tonnes (0.01%) of hazardous chemical waste was mostly generated during explosives initiation system manufacturing.

#### Liquid waste by destination

Our sites generated 32,144 kL of liquid waste that was sent offsite for re-use, recycling or disposal this year. During 2020, we improved controls around the quality of discharge at our Carthage, Missouri site and diverted some discharge to a new liquid waste stream. While this has increased our liquid waste total by 63% on last year, it ensures that our discharge to the environment remains at a high quality. Our liquid waste total includes 19,333 kL of contaminated water, 4,004 kL of hazardous liquid waste and 8,806 kL of non-hazardous waste. Approximately 47% of the total liquid waste was nitrogen-rich water from our fertiliser manufacturing and distribution sites in Australia that was sent offsite to third parties for use as fertiliser and/or woodchip additive. 16% of the hazardous liquid waste was septic liquid or sludge (considered a bio-hazard) which was sent offsite for disposal or treatment.



#### Waste Reduction initiatives

Waste reduction initiatives across our sites include waste sorting for external recycling; on-site recycling of waste water, waste product and floor sweepings; solids recovery from waste water; and a Micro-Auto Gasification System (MAGS) at our Carthage site which converts the organics in non-hazardous explosives contaminated waste into syngas. The syngas is then used as fuel for the MAGS and to generate hot water.

# MANAGING THE IMPACTS OF CLIMATE CHANGE

## 2020 Highlights

**10%** reduction in GHG per tonne ammonia produced against a 2015 baseline



Setting our first absolute GHG reduction target of 5% by 2026 against 2020 GHG<sup>1</sup>

**\$2.7 MILLION** feasibility study to assess the potential of renewable hydrogen for ammonia manufacture



Continued integration of climate change related financial risks into IPL's risk management processes

## IPL CLIMATE CHANGE POLICY

The [IPL Climate Change Policy](#) was developed by the Executive Team and approved by the Board in 2019. The policy states IPL's commitments and describes how the management of climate change related issues is built into the Company's Strategic Drivers.

## CLIMATE CHANGE GOVERNANCE

The [Board Charter](#) and its [Audit and Risk Management Committee \(ARMC\) Charter](#) formally and specifically assign oversight of the Climate Change Policy and climate change-related risks and opportunities to IPL's Directors. As discussed under How We Operate, 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 2020, the impacts of climate change continued to be managed under a comprehensive governance structure which included the Risk, Finance, Sustainability, Strategy and HSEC functions.



We recognise that the impacts, risks and opportunities associated with climate change must be proactively managed in order to continue to provide sustainable economic returns to our shareholders, employment opportunities for our communities, and products and services that our customers need to unlock the essential resources that our communities and economies rely on.

## Exploring Renewable Hydrogen To Make Ammonia

In line with our commitment to reducing our GHG emissions and driven by our Manufacturing Excellence and Profitable Growth Strategic Drivers, in 2020 we completed a \$2.7m feasibility study, supported by the Australian Renewable Energy Agency. The study assessed the potential to use renewable hydrogen to increase ammonia production at our manufacturing facility at Moranbah, Queensland.

Rather than being made from natural gas, renewable hydrogen can presently be made at very small plants using solar energy to split water into hydrogen and oxygen, allowing ammonia to be produced without the GHG associated with natural gas. The aim of the feasibility study was to determine whether renewable hydrogen can be made at an industrial scale, and at a commercially competitive price.

### Key Findings:

- Our study found that solar ammonia at an industrial scale was technically viable and a facility was designed that could reliably provide a continuous supply of renewable hydrogen suitable for ammonia manufacturing. The design uses an off-grid (behind-the-meter) solar energy supply, with 160MW of electrolysis capable of producing approximately 25% of Moranbah's ammonia production.
- Such a facility can be cash flow positive at A\$2.00 per kg of hydrogen. However, to achieve a 5% return on equity contribution, the project would require A\$395m in grant funding, or approximately 60% of the estimated capex.
- Economic displacement of purchased ammonia at Moranbah requires solar hydrogen to be produced at A\$2.00 per kg – at 5% return on investment it was found to be \$4.09 per kg.
- Commercial feasibility therefore requires either:
  - a price premium for the solar ammonia;
  - a reduction in renewable energy prices; and/or
  - an increase in grant funding.

We are proud to have contributed valuable knowledge to the development of a renewable hydrogen industry in Australia and continue to investigate potential partnerships and pathways towards its use.

1. IPL's total global 2020 emissions were 3,616,740 tCO<sub>2</sub>e. The 2020 GHG baseline is subject to adjustment due to unforeseen future expansions and acquisitions or divestments which may occur before the end of the 2026 IPL financial year.

We believe our existing and developing fertiliser products will play an increasingly important role in reducing land clearing and assisting the agriculture sector towards carbon neutrality by increasing yields of food and fibre.



We aim to provide leading technology solutions to meet our customers' needs.

In 2020, we saw 28% growth in the sales volumes of our third high efficiency fertiliser, eNpower™, which was released last year to market. Like our Green Urea® and Entec® products, eNpower™ is specially formulated to retain nutrients in more stable forms for longer periods, increasing plant nutrient uptake and reducing the likelihood of volatilisation losses to the atmosphere as GHG and to waterways through leaching. See [Sustainable Fertiliser Products and Services](#) for more details.

Our Delta E proprietary explosives method reduces both energy use and GHG emissions associated with blasting for our mining and quarry and construction customers. Read more about these products in [Sustainable Explosives Products & Services](#).

We recognise that innovative explosives products and services will be important in order to efficiently and effectively access the minerals and aggregates required for new technologies and infrastructure rebuilding in a world impacted by climate change.

## Climate Change Strategy

We recognise the challenge of reducing our own emissions while continuing to provide products which improve people's lives by unlocking the world's natural resources on the ground. We believe that innovative fertiliser and explosives products and services will play an increasingly important role in reducing emissions and land clearing while increasing yields of food and fibre, and efficiently and effectively accessing the minerals and aggregates required for new technologies and infrastructure rebuilding in a world impacted by climate change.

Our Climate Change Policy describes how the management of the risks, opportunities and impacts associated with climate change is integrated into our six strategic drivers, on which the success of the Company is built.

Download our [Climate Change Policy](#) for more details.



The 2D climate change scenario describes a future to 2050 in which rapid action is taken globally to reduce carbon emissions and limit the degree of global warming to 2 degrees Celsius above pre-industrial levels.

- Climate change mitigation and adaptation policies, including a \$100 global carbon price, value or equivalent financial incentive, are introduced in order to rapidly reduce emissions.
- Extreme weather events occur and many countries invest in rebuilding and adaptation activities, ensuring that economic activity continues and the economies grow where this is possible.
- No and low carbon technologies are developed, including those used in transport, energy, agriculture and new infrastructure builds, as well as hydrogen made from renewable sources.
- New crop varieties and more intense farming aims to increase agricultural output without increasing the amount of land or water used.
- Bulk commodities (metallurgical coal, thermal coal and virgin iron ore) decline overall, while demand for 'new world commodities' increases.

The 4D climate change scenario assumes limited and/or ineffective policy and action to limit emissions, resulting in 'run-away' climate change and an average temperature increase of between 2.6°C and 4.8°C by 2100.

- A global carbon price never emerges and limited action to reduce GHG emissions results in severe physical impacts including higher global temperatures, more severe and more frequent extreme weather events such as hurricanes, drought and flooding, significant sea level rise and associated coastal flooding and storm surges.
- Damage to infrastructure occurs, including ports and ships, which causes delays to shipping and contributes to volatility in global trade.
- Many regions start to focus on adaptation technologies, especially related to food and water security, and as global demand for food and fibre increases, there is a trend towards conflict between nations over increasingly scarce resources.
- Demand for fertiliser shifts to new locations globally. Australian and USA domestic markets are expected to be more resilient than export markets.
- Mining continues to extract metals and minerals, and in nations that can afford to rebuild after extreme physical impacts, steel (and therefore iron ore and metallurgical coal) and quarry and construction output demand also increases.

## ASSESSING CLIMATE CHANGE RISKS & OPPORTUNITIES

As previously noted, 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, 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.

This integrated risk assessment process has been strengthened with the engagement of an expert third party to complete a comprehensive assessment of IPL's physical and transitional (market-based) risks and opportunities associated with climate change. The assessment was conducted using two future climate related scenarios created specifically for IPL (a two-degree scenario (2D) and a four-degree scenario (4D)) in line with TCFD guidelines.

Descriptions of the 2D and 4D scenarios are in the banner to the left and the methodologies used to create the scenarios are reported below.

The identified risks and opportunities are reported on pages 14-17 of the [2020 GRI Index and Data](#) supplement to this report.

Risks considered to be material to IPL are also reported under 'Principal Risks' in the Director's Report of our IPL Annual Reports.

## IPL CLIMATE CHANGE SCENARIO DEVELOPMENT METHODOLOGY

In 2018, IPL engaged a specialist third party to construct two future climate change scenarios: a 2 degree (2D) scenario, in which global average temperatures are limited to less than two degrees Celsius of warming above average pre-industrial levels; and a 4 degree (4D) scenario where global average temperatures increase to 4 degrees Celsius above pre-industrial levels. The 2D and 4D future scenarios were developed specifically for IPL using the following:

- The International Energy Agency World Energy Outlook 2017 and 2018 and associated scenarios;

- The Bloomberg New Energy Finance New Energy Outlook 2018 (BNEF NEO);

- The Climate Futures Tool developed by the CSIRO and the Australian Bureau of Meteorology;

- The Climate Explorer Tool developed by the National Oceanographic and Atmospheric Association

(NOAA), the WRI Aqueduct Tool developed by the World Resources Institute;

- Inputs from the Intergovernmental Panel on Climate Change (IPCC AR5);

- Inputs from the Louisiana Coastal Protection and Restoration Authority; and

- Inputs from peer reviewed scientific journals from sources including the Proceedings of the National Academy of Sciences of the United States of America (PNAS).

The 2D and 4D scenarios each describe how physical climate change and efforts to reduce emissions would impact on areas including:

- carbon pricing and carbon market development;
- the overall economy;
- the development of technology;
- people's consumption patterns and social structures;
- the physical environment;
- energy and power;
- agriculture;
- mining;
- infrastructure; and
- transport

with the risk assessments considering the financial risks and opportunities for IPL in these areas under each scenario.

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

These scenarios are being updated in 2021 which coincides with the release of the Sixth Assessment Report (AR6) by the International Panel on Climate Change (IPCC), providing IPL with the most recently available information on climate change.

## INTEGRATED CLIMATE CHANGE RISK MANAGEMENT

IPL has an integrated Group Risk Framework for the oversight and management of material business risks and manages risk within a comprehensive risk management process which is based on the principles and guidelines outlined in ISO 31000 - Risk Management. Risks are identified, analysed and prioritised using common methodologies, and risk controls are designed and implemented having regard to the overall corporate strategy, with risk controls administered via Group-wide processes.

The Board is responsible for reviewing and approving the overall management of risk and internal controls, including those relating to climate change, and monitors the Company's risk profile, risks and mitigating strategies primarily through the Audit and Risk Management Committee (ARMC). The ARMC's duties with respect to internal control and risk management are set out in the Charter for the ARMC, which requires the updating of IPL's future climate-related scenario assessments every three years.

The Audit and Risk Management Committee and, through it, the Board, receive regular reports from management on the effectiveness of the Company's risk management process. Management, through the Managing Director & CEO and Chief Financial Officer, is responsible for the overall design, implementation, management and coordination of the Company's risk management and internal control system.

During 2020, work continued on integrating IPL's identified material climate-related financial risks into this comprehensive risk management framework.

Risk Bowtie analyses are being used to identify causes and causal groups associated with each material risk, and controls are being identified, modified or specifically designed, with risk and risk control owners assigned to each.

In addition, a climate change-related risk review pack is being developed for use in annual site risk register reviews. The pack will include the 2D and 4D future climate scenarios for each site or region, as well as prompts designed to identify any existing risks in each site register which may be impacted by those future conditions.

**We recognise the challenge of reducing our own emissions while continuing to provide products which improve people's lives by unlocking the world's natural resources on the ground.**

**We believe that our partnerships with customers will be increasingly important in providing solutions to help them minimise their impact regarding climate change.**



## OUR CDP CLIMATE CHANGE & CDP WATER SECURITY REPORTS

are completed annually. These are available on our website and can be [downloaded here](#).

Our 2021 CDP Report, which corresponds to the period covered in this online report, will be completed in June 2021.

## MAJOR PRODUCTS LIFE CYCLE ASSESSMENTS

have been conducted at a high level for the energy & carbon emissions associated with our two major manufacturing processes: **Ammonia & Ammonium Nitrate**.

The first LCA is based on our Phosphate Hill site, which makes ammonia based fertilisers.

The second is based on our Moranbah ammonium nitrate manufacturing site. These are representative of the scale of our operations across the Group.

# SUSTAINABLE EXPLOSIVES PRODUCTS & SERVICES

## 2020 Highlights



**The continued expansion of Differential Energy technology in the Australian market**



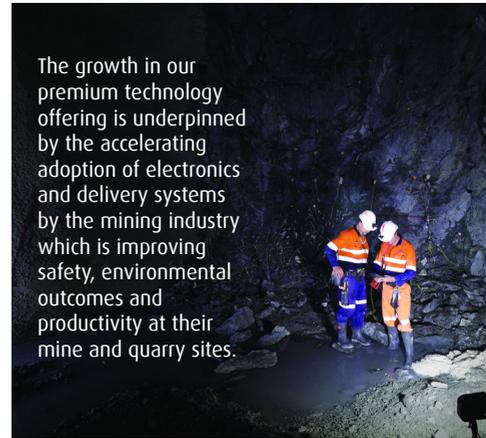
**Continued testing of waste recycled, reclaimed & treated hydrocarbons to supplement virgin fuel sources**



**Further research on inhibited emulsion explosives for safer blasting in hot & reactive ground**



**Further research on products & delivery systems that reduce blast fume emissions & minimise groundwater nitrate leaching**



The growth in our premium technology offering is underpinned by the accelerating adoption of electronics and delivery systems by the mining industry which is improving safety, environmental outcomes and productivity at their mine and quarry sites.

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

- Improve the safety of mining and quarry operations;
- Reduce the environmental and social impacts of mining and quarrying activities; and
- Increase the productivity and efficiency of our customers.

Efforts to mitigate the environmental impacts of our explosives products continue to be focused on the development of new product and delivery technologies which solve our customers' challenges on the ground as well as improving the sustainability of the input materials we use for manufacture.

### Reducing NOx

During 2020, we continued to research both the formation of NOx and methods to reduce NOx to minimise the impacts of the use of our explosives products. Having completed a previous project on effects of different additives in reducing NOx formation, we are now working on the development of low fume explosives for critical areas. This research has resulted in more than six published papers in scientific journals related to reducing NOx emissions during blasting, and we are using this research to develop improved products and on-site product delivery methods.

### Developing Biofuels

In North America, we have developed technology that allows the use of biofuels and biofuel by-products as an alternative to petroleum-derived hydrocarbons for the manufacture of blasting agents and bulk emulsion products. This technology has been enabled in our product line, though take up has been slow due to limited product availability and the relative costs associated with using biofuels if the mine site is not located close by. We continue to offer this service to our North American customers and expect greater uptake in the future. Our Delta E emulsions include biofuels, further reducing our customers' GHG emissions.

### Recycling hydrocarbons & other waste materials

We have also undertaken work with customers and third party suppliers to introduce technologies that use petrochemicals extracted from waste materials as part of the explosive composition. Discarded tyres and waste oil from machinery are ideal candidates for use, particularly at remote mine sites where trucking virgin materials in and waste materials out consumes resources and time. The recycling of a range of 'out of specification' (OOS) materials has also been developed,

and we will continue to test non-traditional sources for recycling hydrocarbons and other materials in partnership with our customers as the opportunities arise.

### Developing products for safer mining in hot and reactive ground

Addressing hot and reactive ground continued to be a significant focus in Australia and the Americas during 2020. The testing of ore samples to determine product compatibility was conducted for a number of our customers in the USA and South America with our R&D teams focusing on optimising inhibiting products for customers mines that are encountering hot and reactive ground conditions at increasing frequency. This work has included the introduction of site specific inhibited products to new markets, the modification of delivery systems and the use of inhibiting solutions to allow variable inhibition of the final product. The results have been very well received as they improve mine efficiency and product performance, as well as safety.

### PRODUCT QUALITY

We collaborate across our global businesses to enable a strong working partnership between our explosives research and development laboratories and our manufacturing plants. This supports our drive for continuous improvement in our operating procedures, particularly where product analysis is required. Ongoing improvements in both the product formulations and the raw materials sourced have resulted in improved explosives product quality and enhanced performance.

A specialised Quality Management System operates in our Explosives Initiations Systems manufacturing plants and our Australian bulk emulsion manufacturing plants that allows us to track and correct product quality using a range of KPIs. These metrics include:

- First Pass Yield, also known as Throughput Yield;
- Process Capability Index, a measure of how closely a process is running to its specification limits, relative to the natural variability of the process;
- Financial cost of non-conforming products; and
- Escape Rate ((Total 'Escaped' Defects / Total Production) x 1,000,000) of units not meeting our high standards of quality control. Our 2020 Escape Rate was just 0.03, much lower than our target rate of <1.

The 'Marketing & Technology Ideas & Work Requests Database', which was upgraded last year, not only provides research and development assistance across the organisation, but also facilitates knowledge sharing and collaboration between IPL's employees across the globe as they find innovative ways to improve product quality.

## Explosives Research & Development in 2020:

### INCREASING CUSTOMER PRODUCTIVITY WHILE DECREASING NOx, DUST, VIBRATION, ENERGY USE & GHG

- Continued development of explosive products & delivery systems that reduce blast fume emissions & minimise groundwater nitrate leaching, including a joint research project with Murdoch Uni.
- R&D support for the continued expansion of Differential Energy technology in the Australian explosives market.

### INCREASING CUSTOMER SAFETY & PRODUCTIVITY

- Continued collaboration with customers to test ore samples & modify emulsion products to create new products for hot & reactive ground in north and south America, allowing customers to operate safely in these demanding environments.
- An Australian Research Council funded project with the University of Sydney to further develop inhibited emulsion explosives for safer blasting in extreme hot and reactive geothermal environments.

### SUSTAINABLE RAW MATERIALS SOURCING

- Continued testing of recycled, reclaimed and treated oils, hydrocarbons and waxes to supplement the use of virgin fuel sources in emulsion-based explosives.
- Continued testing of oxidiser (an ingredient of explosives) sourced from internal and customer waste streams to generate cost-savings by capturing value in recycled raw materials.

## Partnering with the University of Sydney to focus on safer mining in high temperature geothermal ore bodies

In line with our strategic value drivers of Customer Focus and Leading Technology Solutions, a new Australian Research Council funded Linkage Project application with the University of Sydney targeting smart emulsion explosives for up-hole use in deep underground mines has been submitted for funding in 2021. The project, if successful, will build on the technology developed in over 20 years of partnership with the University and allow us to develop solutions to our customers' challenges when working in the hot and reactive ground found in deep ore bodies.

As Rob Rounsley, our Chief Technology Development Officer explained, mining in high temperature ground, such as extreme geothermal environments, has always been a challenge for the industry.

"Creating a solution that improves safety whilst lifting productivity through innovative technology is a key driver for Dyno Nobel, and we are excited to be working on developing this ground breaking project," Mr Rounsley said.

Dyno Nobel has some of the world's most innovative explosives chemists on board, led by Dyno Nobel's Asia Pacific Explosives Research and Development Manager Dr Jeff Gore.

"The team is thrilled to be collaborating with some of the brightest minds in Australia on this project including Associate Professor Brian Hawkett and Professor Roger Tanner at the Key Centre for Polymer Colloids at Sydney University," Dr Gore said.

"Partnering with these world-class experts is an exciting step forward in addressing the challenges global miners face in operation in higher temperature ground."

Research into emulsion explosives for rock blasting in extreme geothermal environments aims at understanding the underlying mechanisms behind the physical and chemical breakdown of ammonium nitrate-based emulsion explosives used for mining in geothermally active regions.

"We want to progress our learnings and apply this knowledge to develop a new class of emulsion explosives for use at higher temperatures," Dr Gore said.

"Our findings will also benefit the Australian mining industry by allowing mining of resources at depth, where the ground temperature is very high due to geothermal heating or other factors associated with high temperature ore body and, importantly, extract these resources safely and with improved productivity."

## Partnering with Murdoch University to design safer, low NOx explosives for mining

A research project to tackle one of the major safety and environmental concerns for the mining industry was the focus of a three year project at Murdoch University with the support of global explosives manufacturer and supplier, Dyno Nobel.

The recently completed \$570,000 Australian Research Council funded Linkage project, which was supported with an additional \$390,000 cash and further in kind support from Dyno Nobel Asia Pacific, investigated ways to reduce emissions of NOx gas during blasts, which can arise in certain conditions.

Project outputs included 6 papers in the refereed scientific literature, with the article "Atmospheric emissions of NOx from mining explosives: A critical review" providing a review of the current understanding in the area, and potential strategies for the path forward. Significant progress was also made towards formulating high bulk strength explosives products with low post blast fume potential.

DNAP R&D Manager Dr Jeff Gore says Dyno Nobel has worked for over 10 years with Professor Dlugogorski (now at Charles Darwin University) to identify suitable explosive technologies to minimise the generation of post blast fumes.

A new Linkage project application targeting the prediction of fume when blasting with mining explosives has been submitted to the Australian Research Council for funding in 2021.

"Working with Charles Darwin University allows access to world class researchers and facilities with the right experience that can significantly shorten the development and commercialisation times for new products and technologies," said Dr Gore.



## SUSTAINABLE EXPLOSIVES PRODUCTS & SERVICES

### CUSTOMER HEALTH & SAFETY

We provide support to our explosives customers to assist them in choosing the right product and blast plan to minimise environmental impacts and our Dyno Consult team regularly conduct audits at customer sites to ensure that drill and blast procedures, standards and product application are safe and follow best practices. In addition to providing information about the technical aspects of the use of our explosives products, our technical support teams and our Dyno Consult business provide documentation and advice to our customers about:

- Product content, particularly with regard to substances that might produce an environmental or social impact;
- Safe use, storage and handling of the product; and
- Disposal of the product as required by applicable law.

This advice is supplied on our websites, on the product label, in the Safety Data Sheet (SDS) or directly to the customer via training sessions. Our Australian labelling complies with the requirements of the SafeWork Australia Code of Practice for Labelling of Workplace Hazardous Chemicals and our Australian SDS comply with the requirements of SafeWork Australia. Our North American labelling meets the requirements of the Globally Harmonized System of Classification and Labelling of Chemicals (GHS) and our North American SDS comply with the Mine Safety and Health Administration (MSHA) for products destined for the mining industry.

### Assessments for new explosives products

New or modified explosives products are typically developed by our research and development team in conjunction with specific customers as directed by the North America and Asia Pacific Product Management teams. As such, the life cycle stages in which health and safety impacts of those products are assessed are dependent upon the customer's requirements. For explosives products, typically this would be focused on the impact of product use, with the assessment included in trials. Dyno Nobel's product development protocol requires all products to be blasted at our R&D test sites prior to being fired in

the ground. Minimum booster testing and Velocity of Detonation (VoD) measurement provide important information on the performance of the explosive product and blast chamber testing is also conducted at our R&D test facility in the US to verify the gas components generated.

### Site and distribution security

Many of the explosive products we manufacture, and some of the fertilisers we manufacture and distribute are classified as security-sensitive and/or dangerous goods and as such, their storage, distribution and sale is regulated by Federal, State and sometimes local governments in North America, Europe, Asia Pacific and Australia. We meet our regulatory compliance and licensing obligations surrounding those products, with internal procedures and training in place for our employees. We keep abreast of regulatory developments in this area and are committed to working with government and key stakeholders to ensure ongoing security.

IPL completed a Group wide ammonium nitrate (AN) storage assurance activity in 2020 following the explosion at the Port of Beirut. The assurance activity focused on sites that store solid ammonium nitrate (Prill) and calcium ammonium nitrate (CAN) to ensure that risks continue to be properly assessed and effectively managed. Through the development of a global AN/CAN Storage Critical Control Verification (CCV), Group wide assurance was provided to all stakeholders, demonstrating critical controls are in place and effective.

Our Dyno Nobel business in North America has worked closely with the Institute of Makers of Explosives (IME) on the Safety and Security Guidelines for Ammonium Nitrate, promoting best industry practices for minimising security and safety risk. Our Dyno Nobel business in Asia Pacific is a founding member of the Australian Explosives Industry and Safety Group (AEISG), which is an associate member of the IME. The Group produces Codes of Practice that promote best industry practices regarding safety and security, and has a seat as an NGO at the Committee of Experts on the Transport of Dangerous Goods of the United Nations Economic and Social Council (ECOSOC). Our sites are also managed under our own strict health, safety and environmental management system.

### CUSTOMER SUPPORT & ENGAGEMENT

IPL's explosives business continues to work closely with our mining, quarry and construction customers at their sites to deliver high-performance solutions tailored to their needs. The business participates in specialist customer sustainability questionnaires, holds customer focussed technical workshops and has dedicated Customer Relationship Managers.



In North America, our Dyno Nobel business and Sandvik Mining and Rock Technology have worked together for more than a decade to provide the Quarry Academy and, more recently, the Mining Academy. These popular educational seminars, taught by experts in the industries, focus on best practices to improve process efficiency and reduce offsite impacts. Each company has expertise in particular areas of mineral extraction, drilling, blasting, crushing, sizing, and processing. By sharing this knowledge and working together to understand the relationship and impact of one process to the other, we add significantly more value for our customers together than independently.

While these events were not held in 2020 due to the COVID-19 pandemic, more than 100 attendees convened in San Antonio, Texas in November 2019 for our 14th Quarry Academy, and our 2nd Mining Academy™ Seminar was held in Louisville, Kentucky in October 2019.

[Our Explosives Engineers' Mobile Phone App](#) shares information with our customers about the most sustainable ways to utilise our products. The app equips current and potential customers with a full range of blasting tools that help optimise the blasting experience in the field. It also provides an electronic method to research product information, reducing the amount of documentation printed in the field.

The Explosives Engineers' Mobile App includes eight critical blasting calculators, access to our technical library and a comprehensive set of Dyno Nobel product information, including product specs and application uses.

Users can also receive real-time updates that feature Dyno Nobel news, recent innovations and new videos.

Moreover, worldwide remote accessibility to the app caters to the fact that remote mine sites often experience difficulties connecting to mobile services.

In its first six months of operation, our App was downloaded by more than 8000 people.



### Case Study: Reducing the impacts of blasting with Delta E

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

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

Differential Energy (DeltaE) is a proprietary explosives method which allows blasters to accurately vary the density of chemically gassed emulsion as it is being loaded into the blast hole, allowing the operator to load multiple densities of gassed emulsion into the same hole in order to match the unique geological characteristics present in the ground.

Because the explosives energy is precisely targeted to match the rock properties, the amount of energy loaded into the blast hole will match only what is required for an optimal blast, reducing total energy and therefore vertical movement at the surface, air overpressure and noise from the blast event.

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

A surface molybdenum mine in the United States found that by switching to Differential Energy with TITAN® 1000 DeltaE, they were able to improve safety, air quality, productivity, fragmentation, and dig-ability. This technology enabled the mine to redistribute the explosive energy in the borehole, putting energy where it was needed by varying the detonation pressure, while using a single truck to load both wet and dry holes. Up to this point, fragmentation, oversize, and hard toes had all been occasional issues for our customer. In addition, some blast events had produced NOX, limiting the size of their blast events.

We worked with the customer to organise a formal three month trial of our Differential Energy technology. The primary goals established for the trial were to:

- Improve safety with consistent product performance;
- Improve air quality by reducing NOX after blast fumes; and
- Improve productivity of the loading process, i.e. faster turnaround times of bulk truck;
- Improve fragmentation and dig-ability; and
- Lower the overall costs of operating mine and mill.

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

This particular surface mine blasts in a variety of geologies. As a result, the blast crew pushed TITAN® 1000 DeltaE to density extremes in order to extract the greatest value from the technology and the trial was extended to six months, over which time there were 109 blasts.

### Safety

Prior to the trial, the mine had reported incidents of undetonated blasting agent in their muck piles. TITAN® 1000 DeltaE proved to be a reliable and resilient product that provided dependable results. No undetonated blasting agent was found in the muck piles during the trial.

### Air Quality

Due to the excellent water resistance of TITAN® 1000 DeltaE, the number and severity of NOX incidents was significantly reduced. This has allowed the mine to consider revising their air quality permit to allow for larger blast events. Water resistance also limits the dissolution and run off of nitrates.

### Productivity

The success and versatility of the TITAN® DeltaE has allowed the mine to go from two bulk trucks to a single truck that can load both wet and dry holes. The TITAN® DeltaE truck not only has a faster turn-around time than the blend truck, but it also has a larger capacity and can load more holes per cycle.

### Fragmentation & Dig Ability

Oversize and floor grade problems were noticeably reduced during the trial period. There were no physical measurements of fragmentation and dig ability during the trial, but shovel operators and drill and blast management observed a significant improvement in dig times.

# SUSTAINABLE FERTILISER PRODUCTS & SERVICES

## 2020 Highlights



Completed a strategic review of our fertiliser business



New long term strategy to grow IPF from a leading fertiliser provider to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health



Plan for continued work as part of the Joint Research Centre of Healthy Soils for Sustainable Food Production & Environmental Quality



434 tonnes of fertiliser bags and farm plastics recycled



To provide food for our growing global population, farmers are seeking to increase production on their land while minimising environmental impacts.

We partner with them by working collaboratively with researchers to develop new products and technologies for sustainable plant nutrition solutions.

During 2020, we continued to focus on increasing our capacity to analyse specific farming customer issues relating to soils, crops and crop nutrition, and aiming to solve these issues through the development of innovative products and services. Following a strategic review of the fertilisers business undertaken this year, our long term strategy is to grow IPF from a leading fertiliser company, manufacturing and distributing a range of domestic fertilisers, to a sustainable soil health company providing sustainable plant nutrition solutions to improve soil health. Our strategy will be leveraged through our expansive distribution footprint to drive new growth products and services towards soil health.

We operate one of the largest commercial plant nutrition research and development programs in Australia, with more than 30 replicated research trials per annum, often in conjunction with customers, independent organisations and agronomists. Our long term experiments aim to produce insights that benefit Australian farmers and allow them to improve fertiliser use efficiency and adopt sustainable fertiliser practices. One example is our collaboration with CSIRO at our "Colonsay" nitrogen and phosphorus experiment on the Darling Downs, Queensland, where we have soil tested for phosphorus applied over 35 years.

**eNpower** In 2019, we commercialised a new patented enhanced efficiency ammonium phosphate fertiliser which aims to reduce nitrogen losses to the air as GHG and to waterways through leaching. Developed in IPF's own research laboratories, eNpower™ 18:20 contains the nitrification inhibitor DMP in IPF's patented DMP-G formulation. DMP works by inhibiting nitrifying bacteria in the soil to slow down the conversion of ammonium N to nitrate, which is more prone to losses to waterways or to air as GHG.

**ENTEC** • Entec® is a treatment that retains nitrogen in the stable ammonium form for an extended period, also reducing the likelihood of losses to the air as GHG and to waterways. 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.

**GREEN UREA NV** • Green Urea NV® is a top dressing fertiliser, recommended where volatilisation losses of ammonia are likely. Green Urea NV® products contain urea treated with the urease inhibitor, N-(n-butyl) thiophosphoric triamide (NBPT) which are designed to delay hydrolysis of urea into unstable forms that may be lost to the atmosphere, thereby reducing GHGs related to fertiliser usage. Green Urea NV® is recommended for:

- intensive dairy and beef pasture production;
- irrigated cotton where urea is applied mid-season;

- forestry situations; and
- field crops where urea is applied to bare soil or soon after crop germination.

### PROMOTING BEST PRACTISE IN FERTILISER USE

Fertilisers are essential to productive farming, allowing farmers to grow more food on smaller areas of arable land than would otherwise be required. High yields are necessary to support the world's growing population. To optimise food and fibre production per unit of nutrient input and return on investment, attention must be paid to how, when and where fertilisers are applied.

It is also important that fertilisers are applied at appropriate rates. Too little, and crop and pasture yields may be sacrificed and produce quality affected. Too much, and the nutrients applied in excess of crop demands may be lost, either to the atmosphere as GHG or to waterways.



To optimise production per unit of nutrient input and protect our waterways, it is important that fertilisers are used at appropriate rates and in a responsible manner. To support this, our analytical laboratory, Nutrient Advantage, offers specialist soil, plant and water testing to advisors and farmers, and tests approximately 100,000 soil, plant and water samples each year.

Our Laboratory Service is NATA accredited, ASPAC certified, and operates in accordance with the international standard ISO/IEC 17025. Testing, together with professional advice from our team of agronomists and our computerised decision-support system, Nutrient Advantage Pro, provides the diagnostic data, best practice information and advice farmers need to choose the right fertilisers and apply them correctly, in order to optimise outcomes from the use of nutrients.

Read about how two of our customers reduced their fertiliser use while increasing their yields in our case studies on the opposite page.

Our Nutrient Advantage Pro system is also audited by Fertilizer Australia every two years to ensure it complies with their fertiliser management best practice recommendations.



## Fertiliser Research & Development Projects in 2020:

### SUSTAINABLE FOOD SECURITY

• Completion of work on a joint research project with the University of Melbourne into new fertiliser technologies for sustained food security. Patents for new technologies have been lodged and further research is planned.

• Continued work as part of the Joint Research Centre of Healthy Soils for Sustainable Food Production and Environmental Quality.

• Continued work on a partnership with the University of Adelaide and CSIRO to develop novel urea coatings for use in arid cropping zones where a particular nutrient deficiency is common, and to investigate trace element impact on functional microbes in cropping soils.

### INCREASING EFFICIENCY & REDUCING NUTRIENT LOSSES

• Continued work on nutrient use efficiency to assist our customers to increase their yields while reducing their costs and environmental impacts.

### DEVELOPING FERTILISERS FOR A WARMING CLIMATE

• The continued testing of silicon fertilisers which have been shown to increase stress resistance in crops & replace silicon lost from soils through certain crops. Results to date indicate that crop tolerance of abiotic stresses, such as heat stress, can be increased.

## Case Study: Entec use means peace of mind, less nutrient losses to waterways & more gain in cane

In wet or dry seasons, Robert Silvini likes the peace of mind that comes with using ENTEC treated fertilisers in his sugarcane.

"By using urea blends treated with ENTEC, I know the nitrogen is staying on my farm and there's a much lower risk of losing it in runoff after a downpour," he said. "I'm also doing my bit to make sure our industry is protecting the Great Barrier Reef."

Mr Silvini grows cane on a range of soil types between Forrest Beach and Taylors Beach, east of Ingham. He feels more confident that his cane is benefiting from the nitrogen supplied by ENTEC urea blends and there's a much lower risk of nitrogen leaching from the sand hills or floodprone blocks he farms.

"I like the idea that by using urea blends treated with ENTEC, the nitrogen stays in the soil for longer and whether the cane is cut early or late, I am giving the crop the best possible chance to make the most of the nitrogen," Mr Silvini said.

Sibby Di Giacomo, branch manager at Ingham Farm Centre, described ENTEC as a welcome development for the district's cane growers.

"Nitrogen management is a constant challenge for cane growers who have to cope with the most unpredictable weather conditions and with the Reef close by, there's increasing pressure on growers to improve nitrogen use efficiency," he said. "ENTEC keeps nitrogen stable in the soil for longer, giving it more staying power so the crop can use the nitrogen more efficiently."

"We like ENTEC because it means growers like Robert have a better alternative for enhancing the efficiency of their nitrogen applications while protecting the environment."



On the Kolan River north of Bundaberg, cane farmers Glenn and Susy Robertson are taking steps to change their fertiliser management for the better.

In addition to long-standing best management practices like soil testing, trash blanket farming and banding fertiliser into the soil, they have recently started using ENTEC and split fertiliser applications.

They are finding the changes especially good for protecting against leaching losses and keeping nitrogen available to the crop for longer on their lighter soils. The farm has a mix of soil types, with river loam, grey forest country and sandy soils. According to Glenn, the most difficult soils to manage are sands, with leaching a real problem.

"To get yields to lift on the sandy soils normally takes a wet year or a lot of watering, but with that comes leaching," he said.

That's why three years ago, they trialled ENTEC with their cane fertiliser blend on half a block of sandy soil. At the same time, they cut the fertiliser rate by about 20%.

"I figured I could cut rates because I would be getting more than 20% extra from the fertiliser if it wasn't leaching away," Glenn said.

The result was a difference of around 35cm of cane growth and around 15% extra yield, which was enough to see him adopt ENTEC on all the sandy country.

"I use it on all the sandy soils now and have started using it in the grey forest country as well with similar results," he said.

"I'm already using less than the local cane board's recommended fertiliser rates and I'll be going further this year," he said. "With ENTEC we're getting better use of the nitrogen, so I don't have to put as much on."

## SUSTAINABLE FERTILISER PRODUCTS & SERVICES

### CUSTOMER HEALTH & SAFETY

Our Zero Harm priority extends beyond our Company to our customers and our local communities. Our Australian fertiliser products comply with Fertilizer Australia Codes of Practice, including the National Code of Practice for Fertilizer Description and Labelling. This code of practice aims to achieve uniform description and labelling of fertilisers across Australia. The label provides advice on the product's nutrient content, and the maximum concentration of impurities that may impact on soil concentrations of the element, plant growth, the health of grazing animals, food safety, and the marketability of farm produce.

Last year we won a [Safe Work Award](#) for our safety campaign to raise awareness and improve handling behaviours for anyone storing and managing our 1 tonne bags across our supply chain. We developed an [online video](#) to promote safer product handling and designed a new safe bag handling decal to clearly demonstrate the correct lifting procedures for the bags.

Safety Data Sheets (SDS), which comply with the Globally Harmonised System of Classification and Labelling of Chemicals (GHS) and meet the requirements of the Australian Dangerous Goods Code and Safe Work Australia criteria, are available for all range products. The SDS include advice on the safe use, storage and handling of the product, and its disposal. Labels are attached to the package, or the Delivery Docket for bulk deliveries. Label information and SDS can also be accessed on the Incitec Pivot Fertilisers website, along with other technical information, including advice on Farm Safety when handling Bulk Bags and storing fertiliser in silos, information on product density and sizing, and the company's [Quality Policy](#), which is included for use in our farming customers' Quality Assurance programs.

### CUSTOMER SUPPORT & ENGAGEMENT

We foster strong ongoing relationships with our customers through collaborative research and product development, the promotion of best practice use of our products to reduce environmental impacts and increase safety, and through a range of customer support and education technology applications.

Our agronomy forum guest speakers have included leading agronomists, scientists, researchers and fertiliser advisers.

Our Agronomy in Practice course focuses on the practical aspects of making credible fertiliser recommendations to farmers, whether they're involved in cropping, pasture, summer crops, sugar cane or horticulture. The course is aimed at training the next generation of agronomists as well as current advisers who want to enhance their skills in soil and plant nutrition. This year's participants include a cross-section of commercial and private agronomists, and government extension agents.

Nutrient Advantage Pro is Incitec Pivot Fertilisers' Fertcare accredited decision support software system. Fertcare is amongst the leading programs addressing the issue of expanding food production to feed and clothe a growing global community through judicious use of fertiliser, while limiting the potential for off-site nutrient impacts such as eutrophication of waterways.

Our Laboratory Service is NATA accredited, ASPAC certified, and operates in accordance with the international standard ISO/IEC 17025. Testing, together with professional advice from our team of agronomists and our computerised decision-support system, Nutrient Advantage Pro, provides the diagnostic data, best practice information and advice farmers need to choose the right fertilisers and apply them correctly, in order to optimise outcomes from the use of nutrients.

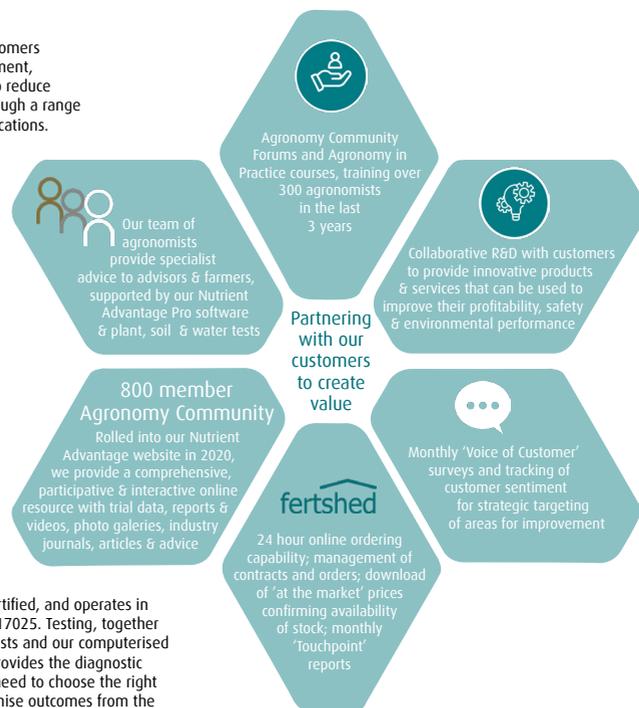
### PRODUCT QUALITY

[IPL's Fertiliser Quality Policy](#), through its Incitec Pivot Fertiliser business, outlines its commitment to providing products and services that meet customers' needs. Fertiliser manufacturing is monitored by IPL's own Quality Control Laboratories and our Ammonia (Big N), Urea and GranAm products are quality assured to AS/NZS ISO9001:2000 standards.

All product imports are sourced in compliance with the Fertiliser Australia National Code of Practice for Fertiliser Description and Labelling. Certificates of Analysis are sought from suppliers to ensure they are within set product specifications that meet statutory limits and market needs. The delivered products are then analysed through our own Quality Control Laboratories to ensure they are within specification, e.g. maximum limits of heavy metal impurities such as cadmium, lead and mercury. We declare the impurity content of fertilisers on the product label.

Through our Customer Complaints Data Base, we track the percentage of our fertiliser product sold (imported or manufactured) which has quality control issues and we set targets to improve/maintain this KPI each year.

During 2020, the work done in 2019 by our IPF Quality Assurance Council to drive improvement through the extension of IPL's manufacturing quality standards to the fertiliser distribution business continued to reduce customer complaints, product handling losses and costs associated with treating dusty products. In 2020, the percentage of fertiliser sales with quality control issues which were compensated for was just 0.04%.



### Case Study:

#### New fertiliser technologies for sustained food security

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

As part of the Joint Research Centre of Healthy Soils for Sustainable Food Production and Environmental Quality, IPL is partnering with the University of Melbourne and experts in fields including chemistry, chemical engineering and soil science to apply a novel multidisciplinary approach to develop and test new, highly-efficient fertilisers. This is not only critical for addressing the triple challenges, but also for the competitive advantages of the Australian fertiliser industry.

The Centre of Healthy Soils for Sustainable Food Production seeks to investigate the practical challenges of understanding the sustainable limits for the productive use of soil, freshwater, river flows and terrestrial and marine systems and reducing impacts on soil, fresh and potable water, urban catchments and marine systems from agricultural systems.

A key aim of the Centre is to reduce the footprint of agriculture production systems by retaining nutrients in food, reducing wastes, developing climate resilient systems and remediating soils. As Australia's largest fertiliser manufacturer, IPL is a key partner in the work of the Centre in regard to introducing new technologies and management practices that will improve farming productivity and sustainability, which has broad social implications for national food security and the sustainability of rural communities.

This continuing partnership aims to produce innovative and cost-effective fertiliser products, which will have a significant impact on the profitability and sustainability of food production. The project provides excellent research training opportunities in a multidisciplinary high-quality environment and will not only advance Australia's reputation as a "clean and green" producer, but also create opportunities for market expansion nationally and internationally.

### LIST OF RESEARCH ORGANISATIONS FUNDED

As reported from page 26 to this page, IPL works with a range of research partners to create shared knowledge in areas relevant to our fertiliser and explosives customers and markets. The research institutions and projects that we funded during 2020 are listed below.

| Organisation and Project Funded  | Period of Funding |
|--|-------------------|
| <b>University of Melbourne</b>   |                   |
| New fertiliser technologies for sustained food security  | 2018-2020         |
| <b>CSIRO &amp; University of Adelaide</b>  |                   |
| Increasing nitrogen use efficiency with micronutrient coatings for urea fertiliser   | 2019-2023         |
| <b>LaTrobe University</b>  |                   |
| Research into the mechanisms by which plants uptake phosphorus and deal with phosphorus deficiency                         | 2017-2022         |
| <b>Queensland Department of Science &amp; Environment (DES), Australia</b>   |                   |
| Smart blending of enhanced efficiency fertilisers to maximise sugarcane profitability                                      | 2018-2020         |
| <b>Various major customers under Partner Program, Australia</b>  |                   |
| Various projects ranging from product evaluations through to farming systems trials to reduce nutrient runoff to waterways | 2014 onwards      |
| <b>University of Sydney</b>  |                   |
| Emulsion Explosives for Rock Blasting in Extreme Geothermal Environments   | 2018-2021         |
| <b>Murdoch University</b>  |                   |
| Low fume explosives for critical areas   | 2017-2020         |

# WORKING WITH OUR SUPPLIERS

## 2020 Highlights

**100%** of major materials suppliers screened (top 20% of spend)



**Design & implementation of the IPL online Modern Slavery awareness training module**



**Continuing to reduce the GHG associated with our global shipping through our partnership with RightShip**



**434 tonnes of fertiliser bags and farm plastics recycled through our partnership with Farmwaste Recovery**

**94.5%** percent self sourced Australian phosphate rock



IPL has processes in place to assess potential and current contracted suppliers to ensure sustainability risks are well understood and addressed.

## OUR APPROACH

Potential and current contracted suppliers are assessed using a questionnaire that covers environment, social and governance aspects and our Americas and Asia Pacific Procurement teams work with suppliers on gap closing action plans where required. Contracts between IPL and materials suppliers also contain clauses that are consistent with IPL's expectations of suppliers' workplace health, safety and environmental performance. The assessment of suppliers and close out of assigned actions is monitored through regular reporting.

**We will deliver cost effective commercial outcomes aligned with stakeholder requirements through a sustainable, systematic sourcing process and active management of supplier spend.**

Our Asia Pacific procurement team assesses the effectiveness of IPL's supplier management processes through the IPL Supplier Relationship Management (SRM) program. Suppliers included in the SRM program are determined by segmentation analysis. The aim of the program is to create value from existing supplier relationship for both parties through discussion and delivering improvements. Regular supplier meetings are held and SRM actions are recorded in the SRM database and tracked by the Procurement Manager. Completed and overdue actions are tracked on the IPL SRM dashboard, which includes targets and KPI's based on the number of meetings held, their timing and Contractor TRIFR & TRIS. A similar program is followed in the Americas.

In line with our commitment to further develop the sustainability of our supply chain, we continued to work with suppliers, customers and industry bodies on a range of initiatives in 2020 to reduce our impacts and bring positive change. Two of these are outlined in the case studies on the following page.

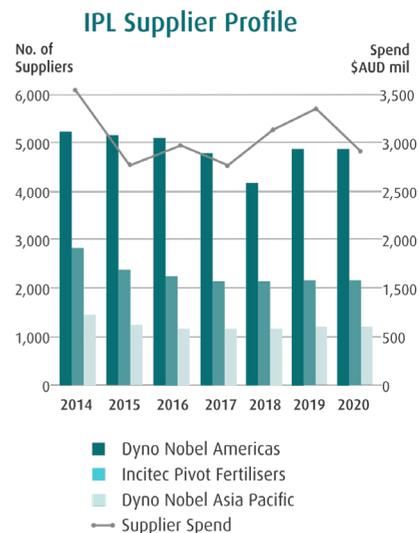
## SUPPLIER CONDUCT AND MODERN SLAVERY

Across all parts of the business, IPL takes seriously its human rights obligations and responsibilities and is committed to operating consistently with the United Nations Universal Declaration of Human Rights and the UN Guiding Principles on Business and Human Rights. IPL's aim is to ensure the approach and the importance it places on upholding human rights is replicated across its business partners and suppliers, throughout the value chain.

During 2020, the IPL Modern Slavery Project Team continued to manage the requirements associated with the Australian Modern Slavery Act

2018 (Cth) which came into effect in January 2019. Along with the development and publishing of the [IPL Supplier Code of Conduct](#) and [IPL Modern Slavery Policy](#) last year, a set of tools and procedures were developed to enable the identification and mitigation of risks associated with human rights in the IPL supply chain, and to ensure due diligence in IPL's own operations. This year, the IPL Modern Slavery Awareness Training Module was developed and rolled out to our procurement teams.

In 2020, IPL directly engaged with more than 7,300 suppliers across 45 countries. As part of our Modern Slavery supplier risk assessment and tiering process, we identified 40 (0.6%) potentially high-risk suppliers based on identified potential modern slavery indicators in the supply chain. These have been prioritised in our screening process to ensure closer investigation and compliance with our policies. Further details will be available in our first Modern Slavery Statement, which will be released in 2021.



## 94.5% SELF-SOURCED AUSTRALIAN PHOSPHATE ROCK

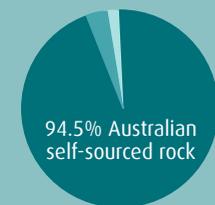
Phosphate rock, a naturally occurring mineral rock, is used in the production of both Ammonium Phosphate (AP) fertilisers and Single Super Phosphate (SSP) fertilisers.

APs are produced at Phosphate Hill, Queensland, using phosphate rock from the mine adjacent to that plant. We also import phosphate rock to make SSP at our Geelong plant in Victoria.

SSP is manufactured using a blend of imported phosphate rock because the composition of phosphate rock varies according to the place of origin, with varying levels of phosphorus, cadmium, odour and reactivity which must be balanced to produce a product that meets with Australian regulations.

IPL purchases phosphate rock from several countries, after undertaking appropriate due diligence on the supply source.

During 2020, 4.0% of our phosphate rock was imported from Togo and 1.5% was imported from Vietnam, with 94.5% being mined at our Phosphate Hill site in Australia.



- Australian IPL Phosphate Rock - 94.5%
- Togo Import - 4.0%
- Vietnam Import - 1.5%

## Working with RightShip to reduce, quantify and offset Scope 3 carbon emissions associated with our global shipping

During 2020, we continued to minimise the emissions associated with our global shipping contractors in the performance of their services for us. By using the RightShip Greenhouse Gas (GHG) Emissions Rating to find more efficient shipping vessels, we are using our influence to bring change in the maritime industry by rewarding ship owners that prioritise energy efficiency in line with our values, our commitment to minimise environmental impacts, and our drive to improve our financial performance.

The relative performance of a vessel is rated from A through to G, the most efficient being A, the least efficient being G. Selecting more efficient ships means less energy used as fuel, lowered fuel costs and reduced Scope 3 carbon emissions. The Rightship GHG methodology uses the standard European energy efficiency scale and allows emissions to be benchmarked and tracked per journey and over time. The methodology has been verified according to an internationally recognised standard (EN16258:2012).

Since we began using the Rightship GHG emissions rating system in 2016, we have reduced our emissions per tonne of cargo by 8%. In 2020, 32% of our ships were rated A or B, and 84% were rated D and above. We used no F or G rated ships in 2019 or 2020.

During 2020, the Scope 3 emissions associated with our global shipping were 80,051 tCO2e.

## In 2020, IPL continued to work with suppliers, customers and industry bodies to collect and recycle our fertiliser packaging through the Farm Waste Recovery initiative.

In any given year, over 80% of our fertiliser sales are bulk sales which require no packaging. However, approximately 15% of our fertilisers are transported to customers in one tonne FIBCs (Flexible Intermediate Bulk Containers) and 5% is sold in small packs. Prior to 2015, we used reusable FIBCs to reduce our packaging impacts.

With the move to single trip plastic packaging, in order to improve customer safety and reduce the risk of potential spills to the environment, we worked with our fertiliser packaging suppliers, plastics reprocessing companies, 23 local councils, the Queensland Department of Environment and Heritage Protection, and 'Farm Waste Recovery', to establish the Sugar Cane Fertiliser Bag Recovery Trial. The key objective of the trial was to develop a sustainable model for the collection of fertiliser bags and the reuse of the recovered materials.

Since then, the bag collection and recycling program has been extended across eastern Australia and we continue to provide financial support to Farm Waste Recovery as well as promotional support to encourage growers to tie the bags in bundles and drop them at local council and private farm collection centres, where they are bailed for transportation to Brisbane for recycling.

Now in its sixth year, the Farm Waste Recovery program continues to grow, with a 90% increase from the pilot year. In total 2,203.5 tonnes of plastics have been collected for recycling since the program began. This amount includes all types of recyclable farm plastics, as well as our fertiliser bags. The success of this program demonstrates the commitment of our customers to a sustainable recycling option for our fertiliser packaging.

**Not only was the volume of plastic collected in 2020 enough to make 2,263 park benches, it means tidier farms, less material going into landfill sites and less likelihood of the plastic packaging ending up in the environment.**



# ENSURING A TALENTED, ENGAGED & DIVERSE WORKFORCE

## 2020 Highlights



**Inclusion in the Bloomberg Gender Equality Index for the third consecutive year**



**Year-on-year increase in female employees with a 6.2% increase in Australia and 8.7% across Asia Pacific**

**2.7%**

**Indigenous employees across IPL's Australian businesses**



**Global Integration of the 'One IPL' Leadership Framework**



**Continued improvement in employee engagement at targeted sites**



IPL believes that a diverse and inclusive workforce, with the right people in the right roles inspired to deliver, will provide an engaging workplace and enable achievement of our business objectives. Our aim is for a workforce that is representative of our markets and communities across our global organisation.

### ENGAGING OUR EMPLOYEES

Our employee engagement strategy includes building people focused leaders across our organisation with the skills and capabilities to coach, develop and inspire. All leaders are responsible to implement local action plans to ensure an engaging experience for all employees. 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.

Building on last year's Your Voice employee survey, a number of pulse surveys were undertaken across targeted business units and manufacturing sites in 2020 to drive and track improvements in engagement.

### DIVERSITY

Diversity of people and perspectives is an essential enabler of innovation and collaboration across IPL and is important to many of

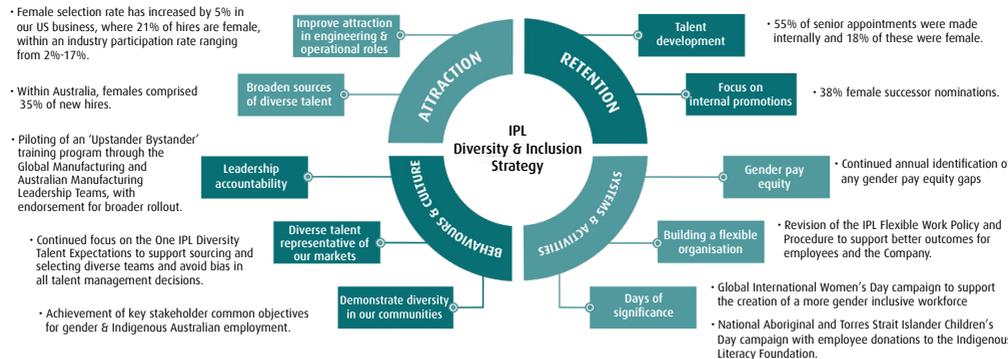
our stakeholders. Diversity at IPL is led by the Executive Team. The Board maintains oversight and responsibility for the Diversity Policy and management's development and implementation of the Diversity Strategy, which is summarised in the graphic below, along with key outcomes in 2020.

Our inclusion in the global Bloomberg Gender Equality Index (GEI) for the third consecutive year demonstrates publicly IPL's commitment to diversity and inclusion in the workplace. During 2020, we continued to progress toward IPL's measurable objectives in relation to gender – to achieve a participation rate of 25% women by 30 September 2022 – and to provide meaningful employment for Indigenous Australians with a goal of a 3% employment rate.

In 2020, the percentage of women across our global workforce increased to 17.6% globally. Female selection rate has increased by 5% in our US business where 21% of hires are female, within an industry participation rate ranging from 2%-17%. Minority representation within the Americas also increased by 0.7%.

Within Australia, females comprised 35% of new hires, bringing female representation to 24.1%. This is a result of the operational commitment to include a qualified diverse candidate to every selection process. Global diversity data by management level is reported in our Scorecard on page 8, and by region in [GRI Index and Data](#).

### 2020 diversity actions & outcomes:



## Talented and Engaged People- Strategic Themes

### ENGAGING LEADERS

Building engaging leaders across our Company who create a One IPL culture and target strategic results.



### TALENTED PEOPLE

Attracting, retaining and developing the right people in the right roles, both now and for the future.



### DIVERSE & INCLUSIVE

Ensuring that a diverse and inclusive environment is the everyday experience for our employees.



### COLLABORATION

Achieving strong business outcomes together as One IPL.



### ACTIONS IN 2020

- Global integration of the One IPL Leadership Framework to inspire our people to deliver results that create value now, and into the future.
- Design, development and piloting of the IPL Frontline Management Program to empower our Leaders to manage their people, assets and resources safely and effectively.
- Began rollout of our OneIPL Leadership Foundations Program to develop common leadership capabilities aligned to our One IPL Leadership Framework.
- Building on last year's Your Voice employee survey, a number of pulse surveys were undertaken across targeted business units and manufacturing sites to drive and track improvements in engagement.

- Launching of the digital, multi-lingual One IPL Learning Pathways training suite, enabling global accessibility for all our people anywhere, any time.
- Completion of the global One IPL Learning and Development platform, bringing consistency and standardisation to the learning and development of our people across the Americas and Asia Pacific.
- Refresh of our Australian Manufacturing Graduate Program to include a value proposition for diverse candidates in technical roles.
- Continuance of our Dyno Nobel Vacation Program, which actively supports Austmine's 'Women In STEM: METS Career Pathway Program', to attract high potential talent.

- Introduction of the OneIPL Talent Ambition with the primary focus of increasing the utilisation of diverse talent through supported development, promotions and succession planning nominations.
- Refresh of the IPL Flexible Work Policy and Procedure
- Promotion of the IPL Family & Domestic Violence policy.
- Continued involvement with the National Association of Women in Operations, the Australian Women in Resources Alliance, Diversity Council Australia and Women in Mining & Resources WA and QLD.
- Facilitation of Australian Indigenous cultural awareness through promoting and participating in Reconciliation Week and NAIDOC Week and celebrating National Aboriginal and Torres Strait Islander Children's Day.

- A focus on collaboration at the semi-virtual annual One IPL Leadership forum.
- Introduction of a Collaboration Competencies self-assessment tool for our leaders and people.
- Collaboration to find new ways of providing remote technical support to our customers using virtual technologies in a COVID safe world.
- Site turnarounds, restarts and remote troubleshooting were achieved through new forms of collaboration during the COVID-19 pandemic.

**2020 EMPLOYEE DATA**  
by region, gender diversity by management level & region, turn over rates, % relieving performance reviews and % represented by collective bargaining agreements are available in '[GRI Index & Data](#)'

### FOCUS IN 2021

- Continued roll out of the of the IPL Frontline Management Program and OneIPL Leadership Foundations Program to build out leadership capabilities.

- Continued expansion of the groups and levels included in the OneIPL Talent Management process to strengthen our talent pipelines.

- Continued focus on the OneIPL Diversity & Inclusion Framework and OneIPL Talent Expectations to ensure we hire diverse talent based on merit.

- Measurement & benchmarking of collaboration competencies to ensure pipelines are robust in collaboration.

### IPL INDIGENOUS EMPLOYMENT PROGRAM AND ENGAGEMENT

During 2020, we began a review of the support that we offer Indigenous Employees. To improve our support, we trained a range of individuals in the skills of Indigenous Mental Health First Aid and have included an Aboriginal and Torres Strait Islander helpline as part of our Employee Assistance Program. IPL is an active participant in the Queensland Resources Council Indigenous Participation Initiative (QPI) which seeks to promote active networks and provide opportunities for cross-sectoral collaboration and information sharing about issues relating to Indigenous participation (employment, training and business procurement) in the resources industry. We continue to look for opportunities to partner with Indigenous organisations for the supply of goods and services and the provision of employment opportunities.

To continue to progress our efforts in supporting Indigenous engagement, a formal plan specific to providing opportunities for Aboriginal and Torres Strait Islander peoples and communities to create shared and sustainable economic and social outcomes is under development.



IPL has also registered with Reconciliation Australia to develop a new Reconciliation Action Plan (RAP). The actions associated with our first RAP doubled the percentage of Australian Indigenous employees at IPL.

# CARING FOR OUR COMMUNITIES

## 2020 Highlights



**100% compliance with required community safety communications**



**Supporting our COVID-19 front line workers with a range of initiatives delivered through our local sites around the world**



**Continuing our BLAST school safety program and Mental Health awareness program in local schools**



**Supporting Australian communities impacted by bushfires**



We believe we have a responsibility to make a positive social & economic contribution to our local communities.

## COMMUNITY ENGAGEMENT

We are committed to building long term and meaningful relationships with the communities in which we operate in accordance with our Value of "Care for the Community & our Environment". We actively engage with community members and representatives of national and international charities, regulators, Governments and grass-roots community organisations including resident groups, councils, farmers, sporting clubs and environmental groups.

We aim to have a positive impact by providing local employment, selecting local suppliers wherever possible and creating shared value for our mining and farming communities. We empower our people to engage with their local communities and seek to mitigate negative impacts and create positive perceptions and outcomes for our business.

Our [Sustainable Communities Policy](#) defines our approach to community relations, including commitments to:

- Listen to and work with the community;
- Strive to be a valued corporate citizen; and
- Respect our neighbours, their values and cultural heritage, and be considerate of them in carrying out our operations.

Day-to-day responsibility for assessing our community impacts and implementing community engagement programs rests with local management at each of our sites, as our site managers best understand their needs and concerns. Local priorities are informed by our Community HSEC Standard, which sets our minimum requirements for engagement. Governance of our community investment programs is overseen by the Executive Team.

## COMMUNITY SAFETY

Our commitment to Zero Harm is our leading priority. Due to the nature of industrial and agricultural chemicals, our operations have the potential to impact on local communities.

IPL has measures in place to monitor, manage and prevent potential negative impacts on local communities which may arise. Due to the nature of our business, many sites are required by law to communicate regularly with the community regarding Community Safety Plans which describe the emergency procedures that should be followed to keep them safe in the unlikely event of a potential incident. In addition, potential impacts are also assessed and addressed. For example, where there is any risk of the release of fumes associated with ammonia, purpose built gas detectors are used. These are permanently located near the perimeters of sites that have ammonia storage tanks, ensuring that any potential leaks can be responded to. The detectors set off

an alarm to response teams at any time of the day or night if gas is detected.

In North America, 56%<sup>1</sup> of IPL's operational sites handle materials which have the potential to impact on local community safety and are required to communicate with first responders in the community. Many of these sites are required to actively participate on Local Emergency Planning Committees (LEPCs) as part of the Emergency Planning and Community Right-to-Know Act (EPCRA). For example, our Cheyenne, Wyoming manufacturing site in the USA participates in the Mutual Aid Emergency Response Group along with the local Fire Department, Holly Frontier Refining and Warren Air Force Base. LEPC membership must include (at a minimum):

- Elected state and local officials;
- Police, fire, civil defense, and public health officials;
- IPL facility representatives;
- Environment, transportation and hospital officials; and
- Representatives from community groups and the media.

LEPCs measure their effectiveness against the EPA recommended guideline 'Measuring Progress in Chemical Safety: A Guide for Local Emergency Planning Committees and Similar Groups'.

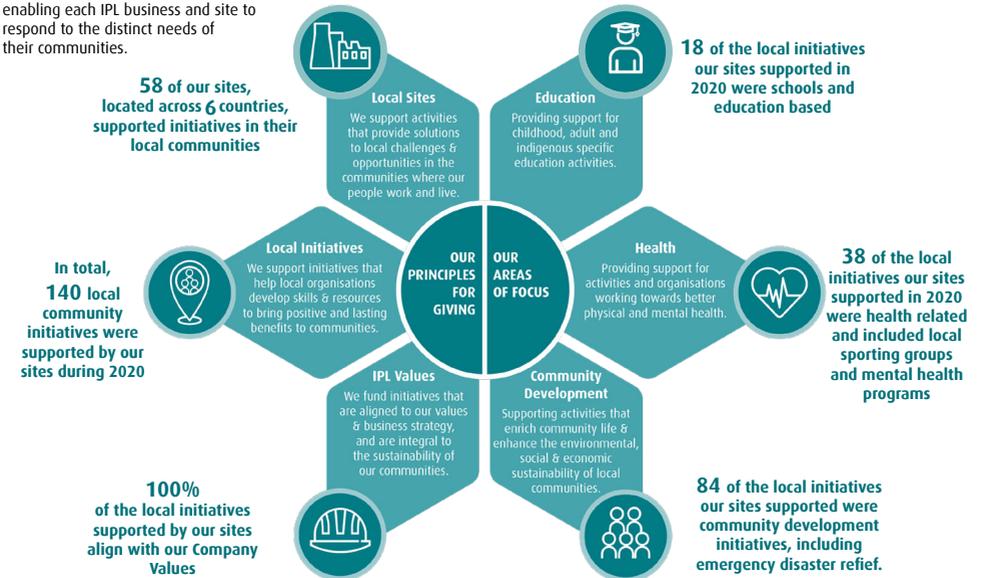
In the Asia Pacific region, 21% of sites have been identified as either 'Major Hazard Facilities' or sites which are required to provide specialised communications to their communities regarding safety. These sites follow 'Safe Work Australia' guidelines and local regulations in developing emergency plans, establishing and evaluating a Safety Management System, and creating and distributing communications to their communities. Major Hazard Facilities are required to hold regular Emergency Response drills to which Emergency services must be invited and which include site personnel. Copies of the Emergency Response Plans must be lodged with regulatory agencies, and information in relation to the site's activities and emergency response is provided to local communities. A 24 hour emergency contact number must be displayed at each facility, and the name of a contact person provided, from whom information may be obtained, and with whom concerns can be raised. We also publish [IPL Community Safety Reports](#) on our website to provide information and advice for neighbours of our facilities who may be impacted by our activities.

In addition, IPL has a continuous improvement management approach in response to incidents such as gas sensor alarm responses and the IPL Issues Response Manual assists crisis management teams to effectively manage communication and engagement in the event of an incident.

1. This percentage is lower than reported in previous years due to the correction of an identified 'double counting' of some sites covered under more than one regulation.

## The IPL Community Investment Framework & Actions in 2020

Our Framework preferences local approaches, enabling each IPL business and site to respond to the distinct needs of their communities.



Our Community Investment Framework helps us to build meaningful community relationships and has enabled us to further support our people in their endeavours to make a difference within their local communities. The framework sets the minimum standards all businesses and sites within the Group are required to uphold when administering community programs and spend, ensuring funds are issued consistently and fairly across our operations. Importantly, the Framework preferences local approaches, enabling each IPL business and site to respond to the distinct needs of their communities.

Our Dollar for Dollar program, a key component of our Community Investment Framework, matches employee donations and site based fundraising efforts that are aligned to our Principles for Giving to a total of A\$2000 per initiative. Our Workplace Giving program offers Australian employees a voluntary Workplace Giving scheme whereby they can donate to one or more of the company's nominated not-for-profit

charities. The process is simple and streamlined, it offers a choice to employees as to how their contributions are directed, and allows them to influence where some of IPL's community giving is focused. IPL matches our employees' Workplace Giving to \$20,000 each year.

During 2020, almost \$540,000 of community investment was made globally through IPL's Dollar-for-Dollar program, the Australian Workplace Giving program and various site-based initiatives. This included \$150,000 to the National Bushfire Disaster Appeal and \$20,000 to match employee donations for the COVID-19 Support Package.

100% of both local and Group donations were made in line with our Principles for Giving, with approximately 4% going to education, 26% going to health initiatives (including sport) and 70% to local community development, which includes disaster relief.

## SUPPORTING OUR COVID-19 FRONT LINE WORKERS

Our resilient people have been united in our response to supporting our communities during the COVID-19 pandemic. Some of the initiatives we are proud to have had our people involved in include:

- 3D face mask printing initiatives;
- donating and transporting medical grade PPE to medical practices in our communities around the world;
- supplying care packs and home-made meals;
- making hand-sewn masks for our people and their families; and
- a range of mental health, wellbeing and educational programs to help reduce the spread of the virus, including a Children's Day competition in Dinamita, Mexico to reinforce good hygiene and physical distancing.



# ABOUT THE DATA

## Scope

This Report covers wholly owned subsidiaries of Incitec Pivot Limited ABN 42 004 080 264.

The Company is a public company, trading on the Australian Securities Exchange as IPL.

In accordance with Global Reporting Initiative (GRI Standards) Sustainability Reporting Guidelines, our reporting covers all entities that generate significant sustainability impacts (actual and potential) and over which we exercise control or significant influence with regard to financial and operating policies and practices.

The financial year ending 30 September 2020 is indicated as '2020' in our reporting.

The statistics in our reporting are for global sites wholly owned by IPL during 2020. Joint ventures are not covered in our reporting, unless indicated, nor are the activities of suppliers, customers or outsourced operations.

The Company participates in many joint ventures with varying levels of ownership interest. A list is provided on pages 104-105 of our 2020 Annual Report.

All financial figures in the Report are in Australian dollars, unless otherwise indicated.

## Data measurement and calculations

**Financial data:** Financial figures are derived from our audited accounts, which are prepared according to the International Financial Reporting Standards (IFRS).

**Greenhouse Gas Emissions data:** Scope 1 and 2 greenhouse gas emissions are calculated based on the Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition).

### Australian Scope 1 and 2 GHG emissions:

- National Greenhouse and Energy Reporting (Measurement) Determination 2008.
- National Greenhouse Accounts (NGA) Factors (2019).

### Americas Scope 1 and 2 GHG emissions:

- US Electricity: eGRID2018 Summary Tables, USEPA eGRID, March 2020.
- US Fuels: Emission Factors for Greenhouse Gas Inventories, March 2018 at [https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors\\_mar\\_2018\\_0.pdf](https://www.epa.gov/sites/production/files/2018-03/documents/emission-factors_mar_2018_0.pdf).
- Canada Fuels: Default CO2 Emission Factors: Environment Canada, National Inventory Report, 1990-2007: Greenhouse Gas Sources and Sinks in Canada (2009), Annex 12: Emission Factors, Table A12-5 (1998-2007 data); Default Heat Content: Statistics Canada, Report on Energy Supply-demand in Canada, 2007 (2009).
- Canada Electricity: Canadian Energy Issues: <http://canadianenergyissues.com/ontario-power-stats/>.
- Mexico Electricity: Ecometrica Technical Paper: Electricity-specific emission factors for grid electricity (2011) Brander, Sood, Wylie, Haughton, and Lovell at <https://ecometrica.com/assets/Electricity-specific-emission-factors-for-grid-electricity.pdf>.

### European Scope 1 and 2 GHG emissions:

- 2011 Guidelines to DEFRA/DECC's GHG Conversion Factors for Company Reporting – Produced by AEA for the Department of Energy and Climate Change (DECC) and the Department for Environment, Food and Rural Affairs (DEFRA) in the UK. Version: 1.2.

### Global Scope 3 GHG emissions:

Our Scope 3 emissions calculation methodology is outlined on pages 20-24 of the [IPL 2020 GRI Index and Data](#) supplement.

## Changes during the period

There were no significant changes to the organisational structure or size of the Company during the reporting period.

## Restatements

IPL's 2019 reporting of Potential High Severity Incidents has been restated in 2020, from 34 to 33, due to the downgrading of one incident during 2020. The 2018 TRIFRs were restated in 2019 due to the finalisation of classification of incidents pending at the time of previous publication dates. Our global SOx for 2018 was restated in 2019 due to improvements in calculation methodology.

## Assurance and data integrity

We aim to ensure that the information we publish is accurate, complete and material and therefore contributes to building trust and credibility with stakeholders. To achieve this we have improved our internal processes for verifying non-financial management information and for reviewing and approving the content of our reporting.

Deloitte provided a limited assurance statement on our Australian greenhouse gas emissions, energy consumption and production figures for the period 1 July 2019 to 30 June 2020. (Deloitte is an independent auditor who also audit the Company's financial statements. See pages 80 and 120-124 of the [2020 IPL Annual Report](#).) IPL is not currently seeking an extension in the scope of assurance for this annual online Sustainability Report.

# GLOSSARY

**Acute physical risks** are physical risks that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, floods and coastal storm surges.

**Agricultural extension** is the application of scientific research and new knowledge to agricultural practices through farmer education. The field of 'extension' now encompasses a wide range of communication and learning activities organised for rural people by educators from different disciplines, including agriculture, agricultural marketing, health, and business studies.

**Chronic physical risks** refer to longer-term shifts in climate patterns such as permanent increases or decreases in average or seasonal rainfall at a particular region, sustained higher temperatures that may cause sea level rise or chronic heat waves, changes in seasonal periods of frost, etc.

**Climate:** The weather conditions prevailing in an area/region in general or over a long period.

**Climate Risk Index (CRI):** Global Index which analyses to what extent countries have been affected by the impacts of weather-related loss events (storms, floods, heat waves etc.). It demonstrates that less developed countries are generally more affected than industrialised countries. Regarding future climate change, the Climate Risk Index may serve as a red flag for already existing vulnerability that may further increase in regions where extreme events will become more frequent or more severe due to climate change. While some vulnerable developing countries are frequently hit by extreme events, for others such disasters are a rare occurrence.

**Climate Change Scenario:** A scenario describes a path of development leading to a particular outcome. A climate change scenario describes a path of development leading to a set degree of rise in temperature above pre-industrial global average temperatures. Scenarios are not intended to represent a full description of the future, but rather to highlight the central elements of a possible future and to draw attention to the key factors that will drive future developments, or in the case of climate change scenarios, financially material climate-related risks and opportunities. Scenarios are hypothetical constructs; they are not forecasts or predictions, nor are they sensitivity analyses.

**Carbon dioxide equivalent (CO2e):** The universal unit of measurement to indicate the global warming potential (GWP) of each of the six greenhouse gases, expressed in terms of the GWP of one unit of carbon dioxide. It is used to evaluate releasing (or avoiding releasing) different greenhouse gases against a common basis.

**Extensive agriculture** (as opposed to intensive agriculture) is an agricultural production system that uses small inputs of labour, fertilisers, and capital, relative to the land area being farmed.

**Global Reporting Initiative (GRI):** a leading organisation in the sustainability field, promoting the use of sustainability reporting as a way for organisations to become more sustainable and contribute to sustainable development. GRI has pioneered and developed a comprehensive Sustainability Reporting Framework that is widely used around the world. To see the GRI indicators covered by our sustainability webpages and publications, see [IPL 2020 GRI Index and Data](#).

**Group:** The IPL group, collectively comprising IPL and its subsidiaries.

**Material:** In the context of the GRI Reporting Framework, 'material' topics for a reporting organisation are those topics that have a direct or indirect impact on an organisation's ability to create, preserve or erode economic, environmental and social value for itself, its stakeholders and society at large.

**Near miss:** An unplanned event that did not result in injury, illness, or damage – but had the potential to do so. The aim of the investigation of 'near miss' events is to identify and mitigate root causes, providing a focus of improvement.

**NOx:** a generic term for the mono-nitrogen oxides NO and NO2 (nitric oxide and nitrogen dioxide).

**N2O:** Nitrous oxide (di-nitrogen oxide), listed as one of six greenhouse gases covered by the Kyoto Protocol and the Greenhouse Gas Protocol.

**Paris Agreement:** A global climate agreement that was reached under the United Nations Framework Convention on Climate Change (UNFCCC) at the 21st Conference of the Parties (COP21) in Paris (30 November to 12 December 2015) to limit average global temperature rise this century well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase even further to 1.5 degrees Celsius.

**Physical risks** resulting from climate change can be event driven (acute) or longer-term shifts (chronic) in climate patterns. Physical risks may have financial implications for organisations, such as direct damage to assets and indirect impacts from supply chain disruption. Organisations' financial performance may also be affected by changes in water availability, sourcing, and quality; food security; extreme temperature changes impacting organizations' premises, operations, supply chain, transport needs, and employee safety.

**Plant:** The equipment used to manufacture a specific product e.g. ammonia. There may be several plants on a single IPL site.

**Direct GHG emissions** occur from sources that are owned or controlled by the Group, for example, emissions from combustion in owned or controlled boilers, furnaces, vehicles etc., emissions from chemical production in owned or controlled process equipment.

**Scope 2 emissions** are GHG emissions which arise from the generation of purchased electricity emissions consumed by the Group. Purchased electricity is defined as electricity that is purchased or otherwise brought into the organisational boundary of the Group. Scope 2 emissions physically occur at the facility where this electricity is generated.

**Scope 3 emissions:** a GHG emissions reporting category that allows for the treatment of all indirect emissions (other than Scope 1 and 2 emissions). Scope 3 emissions are a consequence of the activities of the Group, but occur from sources not owned or controlled by the Group. IPL does not currently collect data on Scope 3 emissions.

**Significant Environmental Incident:** Environmental Incidents as assessed against IPL's internal risk matrix with actual consequences of 5 or higher on a 6-level scale. A category 5 environmental incident is 'a major event or environmental repeat non-compliance with regulatory, licence or permit conditions leading to prosecution or restriction of operations' and a Category 6 environmental incident is one which results in 'permanent or long-term impacts to water, land, biodiversity, air or ecosystems and requires significant remediation, rectification or investment in mitigation'.

**Site:** A single geographic location where IPL operations take place.

**Supply chains:** a sub-set of our value chain, referring to the companies who supply the inputs to our operations, such as raw materials for manufacturing, service providers and providers of other inputs such as electricity and water.

**Transition Risk:** Transitioning to a lower-carbon economy may entail extensive policy, legal, technology, and market changes to address mitigation and adaptation requirements related to climate change. Depending on the nature, speed, and focus of these changes, transition risks may pose varying levels of financial and reputational risk to organisations.

**TCFD:** The Financial Stability Board Task Force on Climate-related Financial Disclosures (TCFD) is a market-driven initiative, set up to develop a set of recommendations for voluntary and consistent climate-related financial risk disclosures in mainstream filings.

**TRIFR:** Total Recordable Injury Frequency Rate: the number of recordable incidents per 200,000 hours worked; includes contractors unless otherwise indicated.

**Value Chain:** Our value chain includes our suppliers (and potentially their suppliers), our operations, our distribution channels, and our customers, who are the end users of our products. Our supply chain (described above) is a subset of this.