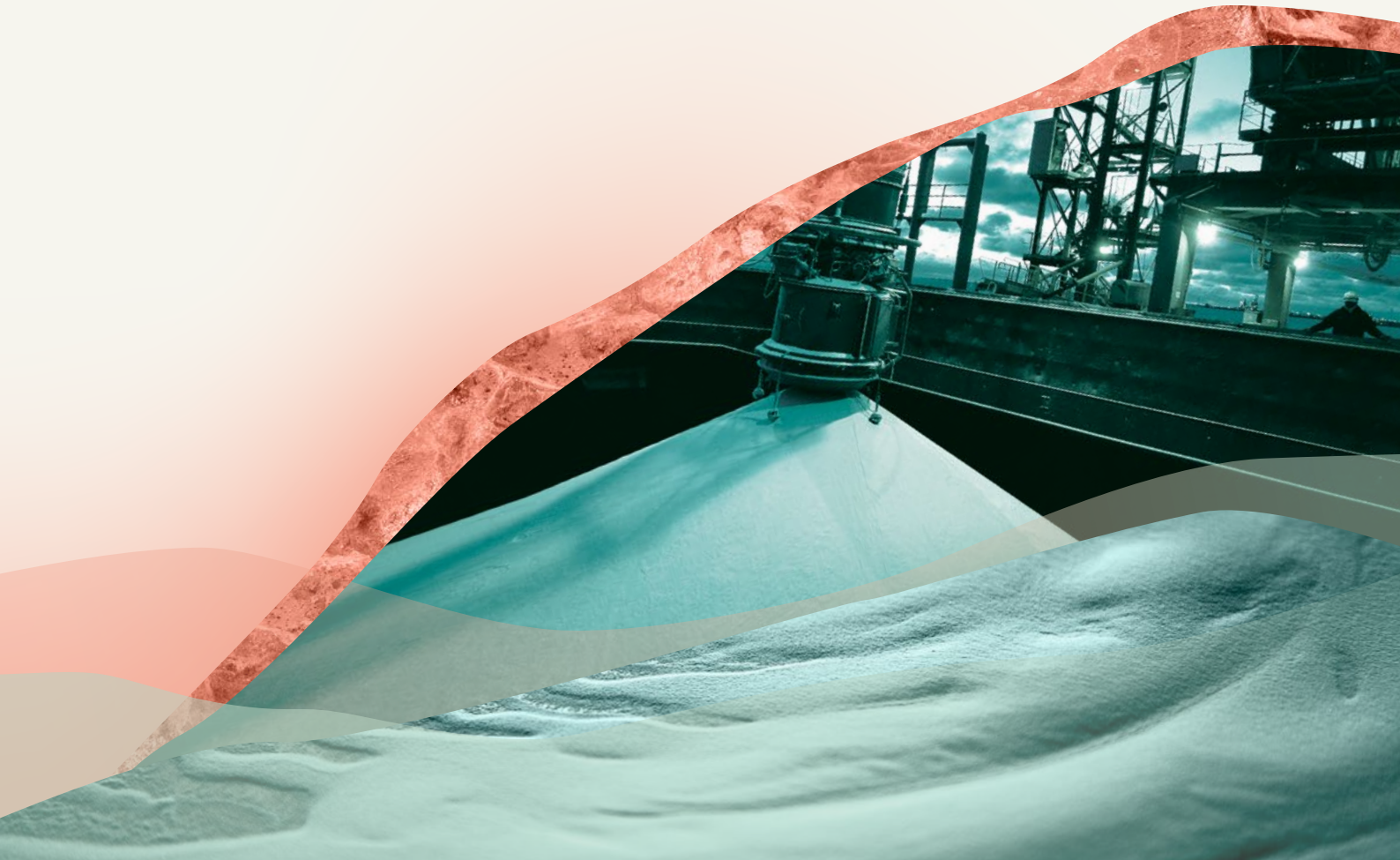
ALUMINA LIMITED

Sustainability Update

2019



Contents

About this report 2
Limitations of this report 3

Chairman and CEO overview 4

About Alumina and AWAC 6
Alumina Limited 7
What we do 7
AWAC 7
Map of operations 10
The aluminium value chain 12

How we create value 14

Alumina's performance in 2019 16
AWAC's economic contribution 16

AWAC performance snapshot 2019 17

Our stakeholders and material topics 18
Alumina's stakeholders 19
AWAC's stakeholders 19
Our material topics 20
The UN Sustainable Development Goals 22
COVID-19 25

Alumina 26

People 27
The Alumina team 27
Diversity and inclusion 28

Governance 29
Board of Directors 31
Business integrity 32
Government compliance and engagement 34
Tax transparency 34
Executive remuneration 35

Our approach to sustainability 36
Climate risk 38
Tailings 38

How we engage with Alcoa and AWAC 39
Strategic Council 40
Business unit representation 41
AWAC entity representation 42
Site visits 42
Direct engagement 42

AWAC 43

Governance 44
Business integrity 44
Reporting and investigating integrity issues, concerns and non-compliances 45
Government compliance and engagement 45
Political contributions 45
Industry relations 46
Tax transparency 46
Supply chain governance 46
Human rights and modern slavery 48
Human rights due diligence 48
Executive remuneration 48
Cybersecurity 49

Community 50
Local commitment with communities 50
Indigenous peoples 53
Economic contribution 53

Environment 54
Energy efficiency and greenhouse emissions 54
Energy access and affordability 55
Climate change 56
Waste, tailings and residue management 56
Facilities closure 57
Water stewardship 58
Land management and biodiversity 59
Air quality 61

People 62
Occupational health, safety and wellbeing 62
Diversity and inclusion 64
Labour relations 65
Employee development and engagement 65

Data tables 66
GRI index 74
SASB indicators 78

About this report

This report covers Alumina's environmental, social and governance performance for the calendar year 1 January 2019 to 31 December 2019.

Alumina Limited is engaged in a global joint venture (JV) with Alcoa Corporation, who are the manager and operator of our joint Alcoa World Alumina and Chemicals (AWAC) operations.

This report is focused on the sustainability impacts of Alumina as a business, and the impacts of the AWAC joint venture business and operations. This includes assets wholly owned by AWAC and assets in which AWAC holds less than 100 percent equity interest, but which are managed by Alcoa. AWAC directly operates or has equity in 12 sites, and holds a non-operator interest in the Ma'aden alumina refinery and bauxite mine, MRN bauxite mine in Brazil, and CBG bauxite mine in Guinea. These sites are excluded from performance information in this report. Further detail and a map of all AWAC operations and facilities (both AWAC operated and non-AWAC operated) can be found on page 10.

For the purposes of this report, references to 'AWAC' describe:

- the physical assets, interests and operations that form the basis of the joint venture (e.g. AWAC's Huntly bauxite mine)
- the outcomes and performance levels from the operation of these assets (e.g. AWAC's production levels, AWAC's revenue, emissions, resource usage, market position)
- the governance procedures and frameworks that determine the strategic directions, investments and acquisitions of the enterprise (e.g. the AWAC Strategic Council).

Unless otherwise noted, data presented about AWAC is on an 'AWAC basis', i.e. it represents the whole of AWAC (which is operated by Alcoa), rather than our 40 percent holding of AWAC or on a full facility basis (includes equity interest of minority owners).

All financial data in this report is expressed in US dollars, and environmental data is metric. Restatements of data from our 2018 report are noted where applicable. Alumina's previous Sustainability Report was released on 26 September 2019.

The material topics, structure and preliminary content of this report were reviewed by the Sustainability Committee of Alumina's Board, and the final content was approved by the Alumina CEO.

This report references the Global Reporting Initiative (GRI) Standards 2016, (see index page 74), and the Sustainability Accounting Standards Board (SASB) Metals & Mining Standard (see index page 78). We have also drawn on elements of the International Integrated Reporting Framework.

Limitations of this report

All data pertaining to Alumina Limited has been prepared by our own organisation. As Alumina is the non-operating joint venture partner in AWAC, we were dependent on Alcoa to provide AWAC performance data contained in this report. As the AWAC assets are a subset of Alcoa's business operations, some information gaps may appear due to the difficulty in separating out AWAC-specific information.

Disclosures of management approach for AWAC operations are taken directly from Alcoa's 2019 Sustainability Report, which is overseen by senior leaders of Alcoa.

Alcoa obtained limited assurance over its 2019 Sustainability Report, including over some of the metrics included in this report. The assurance statement can be seen on page 104 of their report. The AWAC data presented in this report is a subset of Alcoa's data, representing the portion relevant to AWAC. This apportionment has not been subject to assurance.

Further information on prior reports can be found here: **https://www.aluminalimited.com/sustainability-report/**

We value your constructive feedback on Alumina's 2019 Sustainability Report and performance. To provide feedback or for any questions regarding this report, please contact:

Colin Hendry
Assistant Company Secretary
Alumina Limited
GPO Box 5411, Melbourne
Victoria 3001, Australia

Chairman and CEO overview

Welcome to Alumina Limited's 2019 Sustainability Report. 2019 was notable for a number of reasons. In late 2019 the Board of Alumina Limited, in recognition of the increasingly critical nature and demands required in considering sustainability and climate change related matters, approved the establishment of a Sustainability Committee.

The Sustainability Committee, with its defined responsibilities, will further enhance the Company's governance processes regarding sustainability and climate related matters. The Committee has provided the structure not only to broaden the scope of review but also to concentrate on a deeper analysis of material sustainability topics. The Committee meets quarterly and is committed to strengthening sustainability efforts with our joint venture partner and manager/operator of the joint venture, Alcoa Corporation. More detailed information on the Sustainability Committee can be found on page 36 of this report.

To advance both the Committee members and Alumina Limited's management knowledge and understanding on relevant sustainability matters, external consultants have been engaged to provide knowledge building and professional guidance. In 2019 the focus was directed to greater understanding of climate-change science and environmental and social impacts. Learning on various sustainability topics will be ongoing.

Key developments since the introduction of the Sustainability Committee include:

- A reassessment of Alumina Limited's most material environmental, social and governance risks and opportunities that have the greatest impact on our various stakeholders. A detailed analysis was conducted, the results of which are outlined on page 20.
- Improving our level of disclosure informed by the results of the materiality assessment. This process has resulted in the restructuring of this report. We believe the revised format and content provides greater insight into the governance and management of key sustainability matters impacting Alumina Limited and AWAC.
- AWAC specific targets set by Alcoa. Although 2019 performance is matched to combined alumina and aluminium segment targets prepared by Alcoa, in 2020 an AWAC specific CO_2e emission target for AWAC's refining operations has been developed.
- Working together with Alcoa on residue/tailings impoundment management practices and policies at AWAC sites. New impoundment management standards together with operational and governance changes have been implemented.
- Engaging with our joint venture partner to improve understanding and co-ordination of climate-change responses, direction of management of risks and opportunities.

In the future, the Committee will consider matters such as:

- formalising a position regarding the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD)
- energy and emissions options
- continuing gap analysis against best practice regimes to drive improved disclosure
- modern slavery analysis.

Also, in 2019, Alcoa, joined the International Council of Mining & Metals (ICMM) which importantly commits AWAC operations to enhanced environmental, social, and governance practices under the ICMM Mining Principles, further supporting AWAC's sustainable practices.

Performance

In 2019, AWAC continued to deliver incremental improvements in key performance measures. Process efficiency improvements across the refining system and an increased reliance on renewable energy at the Portland smelter resulted in a continuing reduction in GHG intensity calculated per tonne of aluminium production.

However, increased production across the AWAC network of operations in 2019 contributed to an increase in CO_2e emissions in absolute terms compared to 2018. The approximate 3 per cent increase in alumina production from 2018 to 2019 also contributed to an approximate 4 per cent increase in direct energy consumption.

In regards to safety, 2019 was a fatality free year, however there were four near misses. Improvements are being made with enhanced risk-based safety audits to identify and mitigate safety risks and strengthen a culture of safety.

Subsequent to the reporting year, the COVID-19 pandemic has presented a global health challenge and a threat to economic stability worldwide. AWAC rapidly responded with a range of protocols guided by leading public health authorities' requirements. Although some of AWAC's employees have unfortunately been infected, the comprehensive measures implemented have resulted in the overall safe management of employees and continuing and uninterrupted operation of AWAC facilities.

We hope that the restructured Sustainability Report provides improved clarity around the sustainability efforts of the AWAC business and Alumina Limited. Please feel free to provide any feedback on how we might improve our future sustainability disclosures.

Detailed 5-year comparison of performance results are detailed on **pages 67 to 73** of this report.

Mike Ferraro
Chief Executive Officer

W Peter Day
Chairman

About Alumina and AWAC

Alumina Limited is an ASX100 company that offers investors a relatively undiluted exposure to bauxite and alumina markets. Our sole investment is in the AWAC joint venture. Alumina Limited owns 40 percent of AWAC and the remaining 60 percent is owned by Alcoa Corporation, the manager and day-to-day operator of AWAC's global operations.

Alumina Limited

Alumina's purpose is to deliver value to our shareholders through our investment in AWAC. Our strategy focuses on:

- Alumina refineries positioned toward the bottom end of the cost curve.
- The alumina aspect of the aluminium supply chain.
- Offering investors undiluted exposure to the alumina market, as AWAC sells predominantly at the market-driven alumina price indices (API).
- Maintaining an independent balance sheet and low debt to provide investors with a direct and transparent exposure to AWAC's strong cash flows and the alumina price.

You can read more about our strategy in our Annual Report.

Alumina trades on both the Australian Securities Exchange and the OTC Markets in the United States, and at the end of this reporting period had over 56,000 shareholders.

There were no significant changes to Alumina's organisational structure or supply chain during 2019.

What we do

Our role as co-owner of the AWAC joint venture is to be an engaged investor. We monitor and engage with Alcoa to ensure our shareholders receive the full value of their 40 per cent investment in AWAC, and that this value is preserved and increased over time.

Alcoa was first invited to assist WMC Limited (now named Alumina Limited) to develop value from a bauxite deposit in Western Australia using its expertise in the aluminium industry and finance. In June 1961 Alcoa of Australia was formed in a partnership between Alcoa Inc., WMC Limited, Broken Hill South Limited and North Broken Hill Limited. In 1995 AWAC was formed. Alcoa are experienced operators and our role does not involve advising AWAC how to operate.

The value Alumina brings to the partnership is at the strategic and policy level. We aim to bring informed opinions and have regular, open conversations with our partner to support strategic decision making.

Our focus is on understanding the industry, business and markets we operate in, and the drivers of business success for AWAC – including the sustainability aspects that are the focus of this report. We watch our markets closely, looking at the future prospects for bauxite, alumina and aluminium to strategically influence how to price and sell our commodities, and when to invest or divest. We consider the appropriate management of long-term risks such as tailings or climate impacts, often commissioning independent expert advice to support our position.

Alumina brings a different set of perspectives to the JV, backed by deep expertise. We provide beneficial challenge that results in AWAC being guided by robust decisions, and ultimately providing maximum value for our shareholders.

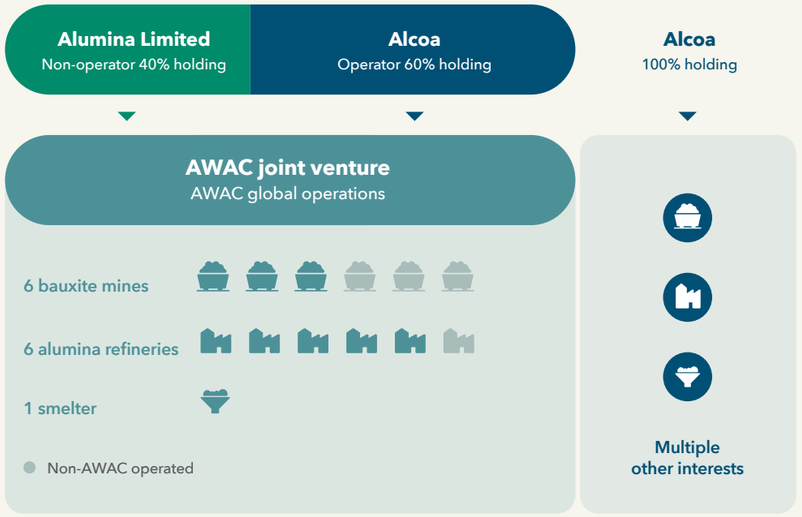
We also support our shareholders' interests by engaging with government through membership of industry associations.

We have a small, focused team, based in Melbourne, who are guided by a Board of Directors. We employ one team member in Brazil who acts on behalf of Alumina as an officer on two Brazilian registered companies in which AWAC holds an interest.

AWAC

AWAC is one of the world's largest producers of alumina. Its assets include low-cost, long-life bauxite mines and alumina refineries in Australia, Brazil, Spain, and interests in Brazil, Saudi Arabia and Guinea. AWAC also has a 55 percent interest in the Portland aluminium smelter in Victoria, Australia. Alcoa is the operator of all AWAC assets.

Alumina brings a different set of perspectives to the JV, backed by deep expertise. We provide beneficial challenge that results in AWAC being guided by robust decisions, and ultimately providing maximum value for our shareholders.



AWAC is structured as an unincorporated joint venture based on agreements between Alumina Limited and Alcoa Corporation. AWAC's headquarters are Alcoa's headquarters in Pittsburgh, Pennsylvania, USA.

AWAC is comprised of the following active entities and their respective subsidiaries:

Entity	Alumina ownership
Alcoa of Australia Limited (Australia)	40%
Alcoa World Alumina Brasil Ltda. (Brazil)	40%
Alcoa World Alumina LLC (USA)	40%
Alúmina Española S.A. (Spain)	40%
AWA Saudi Limited (Hong Kong)	40%

Overview of active AWAC assets

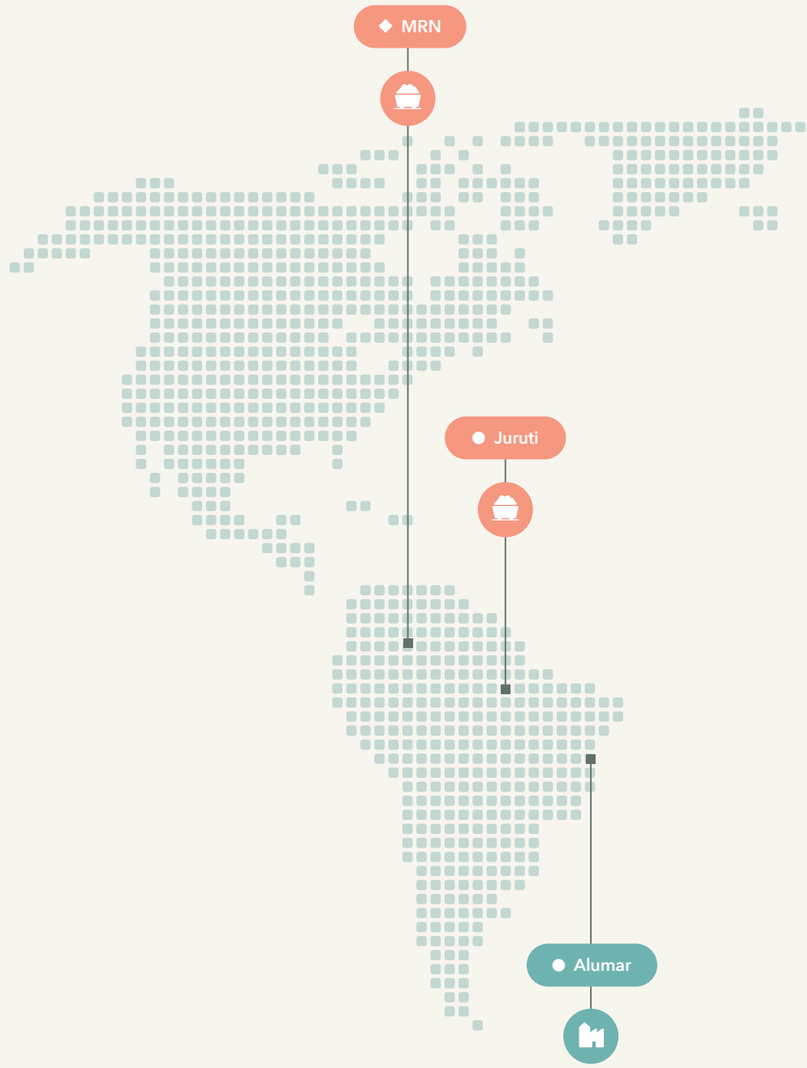
Asset	Commodity	Location	Operator	AWAC ownership	Ownership / Entity
Kwinana refinery	Alumina	Australia	Alcoa	100%	Alcoa of Australia Ltd
Pinjarra refinery	Alumina	Australia	Alcoa	100%	Alcoa of Australia Ltd
Wagerup refinery	Alumina	Australia	Alcoa	100%	Alcoa of Australia Ltd
Huntly bauxite mine	Bauxite	Australia	Alcoa	100%	Alcoa of Australia Ltd
Willowdale bauxite mine	Bauxite	Australia	Alcoa	100%	Alcoa of Australia Ltd
Portland smelter	Aluminium	Australia	Alcoa	55%	Alcoa of Australia Ltd
San Ciprian refinery	Alumina	Spain	Alcoa	100%	Alúmina Española S.A.
Juruti bauxite mine	Bauxite	Brazil	Alcoa	100%	Alcoa World Alumina Brasil Ltda.
Alumar refinery	Alumina	Brazil	Alcoa	39%	Alcoa World Alumina LLC
MRN*	Bauxite	Brazil	Mineração Rio do Norte S.A.	9.62%	Alcoa World Alumina LLC, Alcoa World Alumina Brasil Ltda.
Ma'aden*	Bauxite and Alumina	Saudi Arabia	Ma'aden	25.10%	AWA Saudi Ltd
CBG bauxite mine*	Bauxite	Guinea	Compagnie des Bauxites de Guinee	22.95%	Alcoa World Alumina LLC

* Performance data throughout this report pertaining to AWAC does not include these assets unless otherwise noted.

Map of operations

AWAC employs 5,106 personnel. Another 177 employees at Alcoa of Australia Headquarters have roles that include both AWAC and non-AWAC-related work. AWAC's products – bauxite, alumina and aluminium – are sold globally.

AWAC has major customers in Argentina and the Middle East, and Alcoa itself is also a major buyer for its smelting operations. Some bauxite is sold to China. AWAC maintains a spread of customers across a portfolio of countries and regions to minimise concentration risk.



The aluminium value chain

Transportation

Mining leases

Providing access to significant, long-term bauxite reserves.

Bauxite mining

AWAC is the world's largest bauxite miner, with an interest in 6 mines. Ore is extracted, broken up, and transported to refineries for further processing.

Alumina refining

AWAC have an interest in 6 refineries. Alumina is refined from bauxite at an alumina refinery. 6–8 tonnes of bauxite > 2 tonnes alumina > 1 tonne aluminium.

Alumina smelting

AWAC operate 1 smelter in Portland, Australia. Alumina is converted to aluminium that can then be blended to an alloy specification, cleaned, and then generally cast.

Commodity markets

Bauxite, alumina and aluminium are all shipped to a range of commodity markets.

Product manufacture

Aluminium is a versatile metal being manufactured into a variety of everyday products.

Recycling

Nearly 3/4 of aluminium ever made remains in use today. End use applications from AWAC's products can be recycled and reused endlessly.

Alumina Limited believes that responsible and ethical management of the business is critical to minimising the impact on the environment, the communities in which AWAC operates and business sustainability.

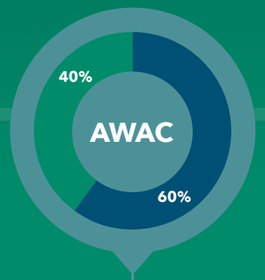
How we create value

The Alcoa World Alumina and Chemicals (AWAC) partnership

Contents

AWAC · Alumina **40%** · Alcoa **60%**

Alumina



WHAT WE DRAW ON

Shareholder equity
Low leverage

Focused team with the right expertise

Independent research and analysis to inform our engagement

WHAT WE DO

We offer investors a relatively undiluted exposureto the alumina market

Engage with industry and stakeholders

Educate and update the market on developments in the aluminium supply chain

Alumina Limited owns 40 per cent of AWAC. Alcoa owns 60 per cent and is the manager and day-to-day operator of AWAC's global operations.

THE VALUE WE CREATE

Dividends and growth in shareholder equity value

HOW WE ENGAGE WITH ALCOA UNDER THE JOINT VENTURE AGREEMENT

2 out of 5 representatitives on AWAC Strategic Council

Proportionate representation on the boards of AWAC entities

Site visits to engage at operational level

Representation at business unit meetings

Ongoing formal and proactive engagement on growth opportunities, strategic developments and operational matters

Dividends received from AWAC

Alcoa

Alcoa is responsible for the ethical and efficient management and governance of operations

What AWAC does

WHAT AWAC DRAWS ON

Financial capital
Alumina 40% Alcoa 60%

Leases
Provide access to significant, long-term bauxite reserves

Equipment and infrastructure
Low-cost, energy-efficient refineries and a smelter
Mining equipment and transportation

Relationships
JVs, customers, suppliers, local communities, regulators

People
Employees, technical experts, contractors

Resources
Land, bauxite, energy, water, chemicals, caustic soda

Mining
6 bauxite mines
→ Bauxite

Refining
6 alumina refineries
→ Alumina

Smelting
1 aluminium smelter
→ Aluminium

THE VALUE AWAC CREATES

End product manufacturing — End use — Recycling

Social impacts
Community employment
Safe, healthy workplaces
Contribution to local infrastructure and community programs

Environmental impacts
GHG emissions, air quality
Waste, tailings, residue
Biodiversity
Land rehabilitation at end of life

Economic contribution
Wages, taxes, royalties, supply chain

Social licence to operate

Dividends from AWAC to Alumina

Financial result

Dividends from AWAC to Alcoa

OPERATING CONTEXT Regulation · Social expectations · Technology · Markets

Alumina's performance in 2019

AWAC's – and thus Alumina's – performance is heavily influenced by global economic growth and trends, and the fundamentals of the alumina and aluminium markets.

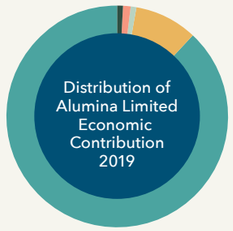
Alumina performed strongly in 2019, despite a softening alumina market leading to a steady decline in the Alumina Price Index (API). During 2019, the API was impacted by lower than expected smelter demand, additional alumina supply following the ramp up of the Alunorte refinery in Brazil, and also additional supply from other refineries.

Alumina was able to maintain strong performance despite these softer prices, as a result of record production at AWAC's tier 1 low cost refineries.

This enabled the Company to record a strong result, return cash to shareholders, and maintain a strong balance sheet.

AWAC's economic contribution

AWAC contributes to the economic development of the countries and communities in which we operate through employment, procurement, taxes, and dividends paid.



- Net financing costs **$8.3m** — 1%
- Employee benefits **$4.5m** — 1%
- Payments to suppliers **$7.4m** — 1%
- Payments for investments in associates **$51.0m** — 9%
- Dividends paid **$532.8m** — 88%

Contents

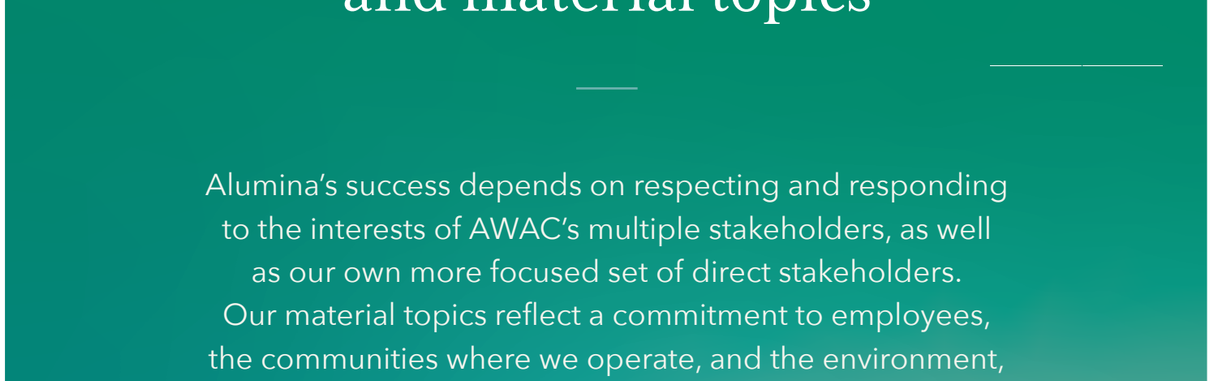
AWAC performance snapshot 2019

Metric	2019	Change	
Revenue (million $)	5,215.8	-22.7%	▼
Bauxite mined (million tonnes on wet basis[1])	44.6	3.8%	▲
Alumina produced (million tonnes)	12.6	3.6%	▲
Aluminium produced ('000 tonnes)	161	-1.8%	▼
GHG (CO_2-e '000 tonnes)	9.3	1.2%	▲
GHG intensity (per tonne of production)	16.5	-2.2%	▼
Energy intensity (GJ per tonne of production)	71.2	0.1%	▲
Freshwater intensity (per tonne of Aluminium production)[2]	4.22	9.9%	▲
Employees	5,106	-1.2%	▼
Lost work day[3,4]	0.283	39.4%	▲
Days away[3,5]	0.733	29.3%	▲
Total Recordable Injury Rate[3]	1.358	1.1%	▲

1 Including moisture content (as opposed to 'bone dry' tonnes).
2 Alcoa calculates intensity measures based on unit of aluminium production. To adjust for the alumina part of the value chain, refining is included at a ratio of 1.9 tonnes of alumina produced to 1.0 tonnes of aluminium produced.
3 All values stated above are on a full facility basis and do not take into account equity interests of AWAC or Alumina Limited.
4 The number of injuries and illnesses resulting in one or more days away from work per 100 full-time workers.
5 The number of recordable injuries and illnesses per 100 full-time employees resulting in a day away from work.

Our stakeholders and material topics

Alumina's success depends on respecting and responding to the interests of AWAC's multiple stakeholders, as well as our own more focused set of direct stakeholders. Our material topics reflect a commitment to employees, the communities where we operate, and the environment, as well as regulators and others that are impacted by and impact on our business.



Alumina's stakeholders

Given the nature of our business, Alumina has direct stakeholders as well as indirect stakeholders through AWAC. We engage with our direct stakeholders as follows:

Investment community	Institutional investors	Investor presentations and roadshows; in-person meetings with institutional investors; Annual General Meeting; program of shareholder communication in accordance with our shareholder communication strategy, which also outlines the avenues available to shareholders to ask questions, provide feedback, and communicate any critical concerns; correspondence and communication with ESG agencies
	Retail shareholders	
	Fund managers and analysts	
	Ratings agencies	
	Financial markets	
	Government	Required reporting e.g. tax contributions, engagement via industry associations
Government and regulators	Industry associations	Participation in the development of submissions
Employees		Given the small size of our team, interaction is direct and constant
Our joint venture partner, Alcoa		Formal and informal pathways including AWAC Strategic Council, AWAC entity representation, direct engagement (see page 39).

No critical concerns from stakeholders were communicated to Alumina during 2019. AWAC received a request from the Church of England to disclose all AWAC impoundments, which was then subsequently disclosed on both the Alcoa and Alumina websites.

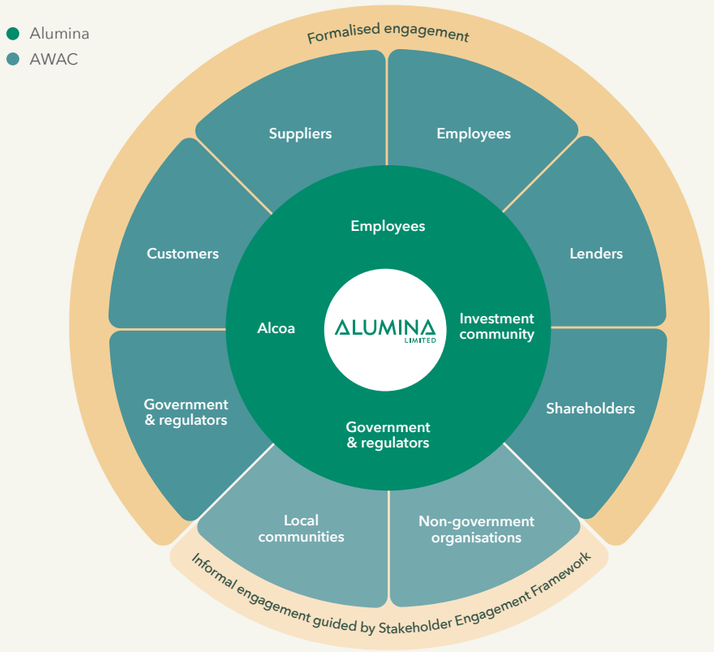
AWAC's stakeholders

Alcoa defines a stakeholder as any person or organisation that directly impacts, or is impacted by, its activities. AWAC's stakeholders, as identified by Alcoa, include customers, suppliers, employees, lenders, local community members, public agencies that regulate its enterprises and non-governmental organisation (NGOs) that are interested in AWAC's activities.

AWAC has established formalised channels of engagement for contracted parties (including suppliers, employees, customers, and lenders). Interaction with community groups and NGOs is more informal, guided by Alcoa's Stakeholder Engagement Framework. The Framework provides a systematic process to first identify appropriate stakeholders and then engage with them in the most effective manner, ensuring transparent and ongoing dialogue. More detail on the Framework is provided on page 50.

For more detail on how Alcoa engages with its stakeholders, see the **Alcoa Sustainability Report page 34**.

Alumina and AWAC stakeholders



Our material topics

In preparation for this 2019 sustainability report, Alumina undertook an updated materiality assessment to better understand our most important environmental, social and governance risks and opportunities. The approach was guided principally by the Global Reporting Initiative Standards 2016 (GRI) and considered:

- The issues that matter to Alumina's and AWAC's business performance
- The issues that matter to Alumina's and AWAC's stakeholders
- The issues on which Alumina and AWAC does or could have an impact

Since a comprehensive materiality assessment was previously conducted in 2018, this materiality assessment included:

- Desktop analysis of:
  - Internal policies, principles, and processes
  - External sources including peers, media, and industry reviews (including the International Council on Mining and Metals, of which Alcoa is now a member)
- Weightings applied relative to the importance of each input
- Analysis of results, prioritisation of topics, and the development of topic definitions
- Validation of findings with the executive team and Sustainably Committee of the Board in dedicated workshops.

A key input to the assessment was Alcoa's own materiality assessments of its bauxite and alumina divisions. This was also guided by GRI and the AA1000AP Accountability Principles 2018, and included extensive desktop research and stakeholder engagement.

The resulting material topics are shown below, aligned to four major themes as in 2018. In 2019, there have been minor updates to topic names and definitions, with the emergence of a more comprehensive list of environmental topics. While all topics are relevant to AWAC, this year we have for the first time identified those topics that are material specifically in the context of Alumina itself, and we address these in the first chapters of this report.

Importance to Alumina and stakeholders	High	Medium	Low	UN Sustainability Development Goals (SDGs) linkage
Governance	Business integrity Δ	Government compliance and engagement Δ Industry relations Δ Tax transparency Δ Supply chain Modern slavery	Cybersecurity Executive remuneration Δ	8 DECENT WORK AND ECONOMIC GROWTH 16 PEACE, JUSTICE AND STRONG INSTITUTIONS
Community	Local commitment with communities	Economic contribution		1 NO POVERTY 8 DECENT WORK AND ECONOMIC GROWTH
Environment	Climate change Energy efficiency and greenhouse emissions Waste, tailings and residue management Facilities closure Waste stewardship	Land management and biodiversity Energy access and affordability Air quality		3 GOOD HEALTH AND WELL-BEING 7 AFFORDABLE AND CLEAN ENERGY 12 RESPONSIBLE CONSUMPTION AND PRODUCTION 13 CLIMATE ACTION 15 LIFE ON LAND
People	Occupational health and safety	Diversity and inclusion Δ Labour relations	Employee development and engagement	3 GOOD HEALTH AND WELL-BEING 8 DECENT WORK AND ECONOMIC GROWTH

Δ This topic has a dimension relating specifically to the management of the matter within Alumina, as well as a dimension relating to the management of the matter within AWAC, which is in the control of Alcoa. All other topics relate to AWAC, and are in the control of Alcoa rather than Alumina.

With the approval of the Executive team and Sustainability Committee, the results of this materiality assessment process have been used to inform the direction of Alumina's commitments and approach towards sustainability, the development of this 2019 Sustainability Report, and engagement with Alcoa.

The COVID-19 pandemic emerged subsequent to the reporting period. We expect this to impact a number of material topics over 2020, including Occupational health and safety, Local commitment with communities and Supply chain, among others. (See further page 25 below.)

The UN Sustainable Development Goals

Alumina endorses the UN Sustainability Development Goals (SDGs), an interrelated set of 17 global goals agreed by the UN in 2015, which aim to address some of the world's most pressing economic, environmental and social issues. We have mapped our material topics to the SDGs to assist us to understand our actual and potential impacts through AWAC.

The mapping process focused on two major considerations:

1. SDG linkage – alignment of Alumina's material topic definitions with relevant SDGs, based on the associated SDG targets and indicators.
2. SDG impact – a high-level qualitative analysis of the potential positive and negative impact of our operations on the achievement of the relevant SDGs.

Through this exercise, we identified the SDGs with the strongest link to Alumina's sustainability themes, as indicated in the diagram above.

The definition and boundaries of our material topics are outlined on page 23.

Material topic	Definition	Boundary
Governance		
Business integrity	Ensuring appropriate governance mechanisms are in place to adhere to the highest level of integrity and transparency throughout operations.	Alumina AWAC
Supply chain	Governance and transparency in management of social and environmental supply chain impacts and risks.	AWAC
Modern slavery	Human rights considerations in the direct actions of AWAC, focusing on modern slavery compliance within the supply chain, and within our own operations.	AWAC
Government compliance and engagement	Engaging with government in all operating countries to generate transparent discourse, and participation in the development of public policy.	Alumina AWAC
Industry relations	Approach to managing legislative change, geopolitical risk, and government and industry expectations.	Alumina AWAC
Tax transparency	Transparency relating to payments to governments in the regions that operations are located in.	Alumina AWAC
Executive remuneration	Managing the executive remuneration framework and its link to performance and KPIs.	Alumina AWAC
Cybersecurity	Developing strong practices to manage risks from the increasing role of technology in the business.	AWAC
Environment		
Energy efficiency and greenhouse emissions	Effective management of energy consumption and associated greenhouse emissions from operations.	AWAC
Water stewardship	Managing withdrawal, storage, and consumption of water used in mining, refining and smelting operations. Ensuring access to water and managing impacts of water use on local communities and environments, including maintaining water quality.	AWAC
Waste, tailings and residue management	Managing waste products associated with operations, the most significant being tailings storage facilities, bauxite residue stored in impoundments, spent pot lining, and water used in mining, refining and smelting operations.	AWAC
Climate change	Managing physical and transition risks from climate change, including the management of the impacts of climate change through adaptation and mitigation.	AWAC
Air quality	Managing air quality through dust suppression, and mitigation of process emissions.	AWAC

Material topic	Definition	Boundary
Environment (continued)		
Land management and biodiversity	Managing the progressive rehabilitation of operational sites, and the management of impacts of operations on biodiversity, habitat protection and restoration.	AWAC
Energy access and affordability	Access to, reliability and affordability of energy, including consideration of the transition towards cleaner energy sources.	AWAC
Facilities closure	Managing mine closure, stranded assets and land holdings (including impacts on the community) including relinquishment and provisioning for closure.	AWAC
People		
Occupational health and safety	Managing health and safety risks including promoting a culture committed to continuous improvement and disclosure on safety performance, and promoting the wellbeing and support of our people.	AWAC
Employee development and engagement	Approach to attraction and retention related practices, training and investing in developing employee skills, and performance and career development reviews.	AWAC
Diversity and inclusion	Advancing diversity and equal opportunity among employees and governance bodies, including gender and cultural diversity, and women in leadership roles.	Alumina AWAC
Labour relations	Consultative practices with employees and its representatives, including the approach to communicating significant operational changes, freedom of association and collective bargaining.	AWAC
Community		
Local commitment with communities	Commitment to the management of the economic, social, cultural, and environmental impacts on local communities. This includes the protection, respect and remediation of human rights impacts, managing health and safety implications, and engagement with and investment in local communities.	AWAC
Economic contribution	Broader economic value generated and distributed in the form of taxes, spend on suppliers, as well as local employment and wages and benefits paid.	AWAC

COVID-19

The impacts of the COVID-19 pandemic have been felt by every country and industry during 2020. While this arose after the 2019 reporting period, we offer an overview of the key impacts to Alumina and the swift responses coordinated by AWAC:

- The health and safety of our global AWAC workforce was the most important issue to address. Alcoa implemented comprehensive measures to minimise the risk of exposure to the COVID-19 virus across all facilities, instituting protocols that align with the US Center for Disease Control and Prevention, the World Health Organization, and other public health authorities. Some of these measures included:
  - Alcoa global crisis response team monitoring all reported cases across each region
  - Suspended all non-essential travel since February 2020
  - Adjusting shift patterns
  - Instituting good hygiene protocols and social distancing
  - Working from home where practical and possible
  - Quarantine protocols for all of those who may be ill or potentially exposed to the virus.
- At the time of writing, all AWAC assets remained operational and with the appropriate protocols in place to protect the workforce, suppliers, customers and communities. The dynamic situation is being constantly monitored, with the primary focus on the safety and health of people.
- The change in market demand has prompted Alcoa and Alumina to halt the refinery expansions in Western Australia that had been planned for 2020.

Alumina

The following chapters address topics that are material for Alumina itself, and describes how we manage them.

People

Our small, focused team bring the right expertise to provide the AWAC JV with a robust 'second opinion', through a different set of skills, experience and viewpoints.

Our team brings experience across a range of fields that enable us to provide informed oversight of AWAC, including an understanding of markets; business strategy; legal expertise to navigate the JV agreement; financial and accounting expertise; regulatory expertise; and leadership to bring it all together. We also make use of independent experts as needed to provide 'deep-dive' analysis or to add breadth of expertise not held within our small team.

Regardless of their field, we look for people with deep expertise, commercial skills and judgement, who can put forward well-informed opinions, and who can build relationships with our JV partner.

The Alumina team

	Female	Male
Full-time employee	2	8
Part-time employee	1	3
Permanent full-time equivalent (FTE)	2.6	10.0
Contractor	0	1

Our small team operates with a high degree of shared knowledge about the business. We have a relatively informal culture and structure, where all staff have access to the leadership, including exposure to the Board. We form small working groups, but our size prevents silos and minimises bureaucracy. Our people are able to work autonomously, be well-informed, put forward a viewpoint and be listened to, and have a meaningful contribution to the business. This strong culture, together with the rewards of working for an ASX100 company, keep our turnover low.

While all employees have individually negotiated contracts, they have the right to freely associate and collectively bargain in line with our Human Rights policy.

We value the health, safety and wellbeing of our people. As an office-based business, incidents are rare. When our people go on site visits to destinations with a higher risk profile, we conduct advance checks of health and safety requirements and personal safety issues, and provide access to emergency assistance. During the reporting period, Alumina reported no work-related injuries or hazards. Further detail on our management of health and safety can be found in our Environment Health and Safety Policy.

Diversity and inclusion

Just as our opinions bring value to the AWAC JV, we believe that diversity contributes to the value of the Alumina team. In a small team, the value of diversity in thought, experience and skills is magnified.

Our approach to diversity is designed to ensure that the Company offers an attractive and challenging work environment to secure and retain talented and professional employees.

Our diversity and inclusion policy sets out our actions to improve diversity at Alumina, including a focus on the recruitment process, providing working arrangements conducive to work/life balance, and encouraging diversity at board level, with a target not less than 30 percent of directors of each gender.

We operate in accordance with these objectives. However, Alumina has a small team and low turnover; this fact, combined with operating in a historically male-dominated industry, mean that the diversity of our team is constrained in practice. As at 31 December 2019, 20.6 per cent of Alumina Limited's full-time-equivalent employees were women.

Further information on these policies can be found on **our website**.

Governance

Our shareholders expect that all decisions made on their behalf are done so with integrity and careful consideration. Similarly, we need to understand and respond to the interests of all our stakeholders. Robust, ethical and transparent governance lays the foundation for the value we create through our oversight of the AWAC business.

As a key topic, governance is addressed across various sections of this report:

This chapter covers Alumina's governance structures and process

'Our approach to sustainability' (page 36) gives more detail on governance of sustainability specifically

'How we engage with Alcoa and AWAC' (page 39) details our formal and informal roles in the governance of AWAC

'AWAC governance' (page 44) details Alcoa's approach to governance, as operator of AWAC

Why this matters

As the non-operator in our JV, Alumina's role is to provide sound and informed guidance. We achieve this by ensuring our governance practices are strong and ethical, and our leadership is experienced and aligned to our values and principles.

How we manage this

When making decisions on behalf of our shareholders and organisation, we take into account our corporate governance responsibilities:

- analysing and adopting best practice governance principles and practices
- overlaying business philosophy and practices with our ethical values and principles
- prudent delegation of responsibilities
- appropriate monitoring systems, processes and authorities, responsible delegation of duties and authorities and internal controls.

Our governance structure is outlined below:

Governance guidelines and oversight

Values and code of conduct

Board and committee Charters

Board of Directors

Audit & Risk Management Committee

Financial management and reporting

Internal controls

Risk management framework

Audit strategy and performance

Nomination Committee

Select and appoint Directors and CEO

Identify necessary Board and Committee competencies

Assess Director skills and competency

Compensation Committee

Oversight of remuneration, compensation plans, policies and practices

Sustainability Committee

Assist and advise in relation to ESG matters, including climate change.

Commenced 1 January 2020

Delegation and controls

Delegated authorities

Corporate governance and internal controls

Chief Executive Officer

Senior Management – Management Committee

The CEO and the senior management team, have the responsibility to identify the material ESG topics and report on those topics to the Sustainability Committee. Senior Management will liaise and enquire of the relevant Alcoa management responsible for oversight of material topics that impact the AWAC operations and business.

The Sustainability Committee will direct Senior Management to examine and report on areas of interest. Senior Management are also delegated authority to engage independent expert consultants to assist in analysis and more informed knowledge of key topics.

Further information on our approach to governance of sustainability can be found on page 36, which also outlines the role and responsibilities of the Sustainability Committee in more detail. A full description of Alumina's Board Committees, and additional governance details, are available in our 2019 Corporate Governance Statement.

Board of Directors

Our focused team of directors brings an appropriate mix of functional skills and international experience from the alumina industry and other relevant backgrounds (see further detail on page 8 of our 2019 Corporate Governance Statement.) The Board Committees are also selected based on their relevant experience and expertise.

In 2019, our Board members were:

Director	Board status	Date of appointment
Mr Peter Day	Chairman, Independent Non-Executive Director	1 January 2014
Ms Emma Stein	Independent Non-Executive Director	3 February 2011
Mr Chen Zeng	Non-Executive Director	15 March 2012
Mr Michael Ferraro	Executive Director	5 February 2014
Ms Deborah O'Toole	Independent Non-Executive Director	1 December 2017
Mr John Bevan	Independent Non-Executive Director	1 January 2018

As with our employees, we recognise the value that diversity brings to board performance. During the reporting period, two of our six board members, or 33 per cent, were female.

To track and improve the performance of our Board, we have an annual self-assessment process in place that links outcomes to key performance criteria contained in the relevant Board and Committee Charters. All Board members engage in this process and results are reviewed at the Board level.

During 2019, we also commissioned an external review of the Board.

Business integrity

Why this matters

Our stakeholders need to have confidence that Alumina's actions and decisions are taken in accordance with our values. Business integrity at Alumina means having appropriate governance mechanisms in place to adhere to the highest level of ethics and transparency throughout all of our actions and operations, including the disclosure of associated processes, performance and business risks to shareholders.

How we manage this

We uphold our focus on business integrity by acting in accordance with our values in all that we do:

Integrity	We will stand by our word ensuring reputation as a highly professional team delivering on commitments to all stakeholders
Honesty	We will be open, honest and fair in our dealings with people based on a clear set of ethical standards
Respect	We will respect each other and company property
Personal commitment	We will be personally responsible for acting in accordance with the law, Alumina's values, Code of Conduct and company policies, and be accountable for expected results
High performance	We will be energised by the excitement and fulfilment of raising the bar in everything we do

To help translate our values into practice, Alumina has developed a suite of policies, strategies, and codes to guide our management and employees:

Alumina guidance	How these are applied
Code of Conduct	Alumina's values and principles are underpinned by a succinct list of 13 behaviours in our Code of Conduct
Whistle-blower policy	Outlines the rights of all staff to: – Report any perceived malpractice, impropriety, serious unethical behaviour, legal or regulatory non-compliance or questionable accounting or audit matter; and – Expect and receive protection from any reprisal or detrimental action resulting from such disclosure
International business conduct policy	Outlines principles and procedures on conducting business internationally and complying with the requirements of various laws, including prohibition of bribery and related conduct.
Share-trading policy	We conduct annual training for all employees regarding our share trading policy
Corruption and money laundering policy	We provide our employees with clear communication and annual online training on Alumina's human rights and anti-corruption policies.
Director independence	Each Director has an ongoing responsibility to determine if they have a conflict of interest, whether direct, indirect, real or potential, that may impede their impartial decision-making. Director independence from day-to-day management is also viewed as essential to ensure objective governance, and our guidelines for identifying independence are formalised in a policy. One of our Non-Executive Directors is not considered independent due to current and previous roles with a substantial shareholder in the Company. Directors are required to disclose to the Board details of any transactions or interests that may create a conflict of interest. Alumina Limited's Constitution expressly forbids a Director voting on a matter in which they have a direct or indirect material personal interest as defined in section 195 of the Corporations Act 2001 to the extent that it is prohibited by the Corporations Act 2001 or ASX Listing Rules.

Contents

Government compliance and engagement

Why this matters

AWAC's operations span a broad range of legal, regulatory and political systems. AWAC's – and thus Alumina's – financial results could be adversely impacted by new or increasingly stringent requirements, or by significant legal proceedings or investigations. It is therefore critical that we stay abreast of relevant regulation and have robust compliance processes in place.

How we manage this

AWAC compliance sits with Alcoa as the AWAC operator (see page 45). The primary mechanism for Alumina to monitor and oversee AWAC compliance is through our participation in the boards of the AWAC entities and via the Strategic Council (see page 40).

Given the potentially significant impact of new legislation on our business, we also seek to inform discussion around the regulation of our industry through participation in industry associations. Particular focus areas for Alumina are energy and greenhouse gas policies. During 2019, Alumina was a member of the following organisations:

- Australian Aluminium Council
- International Aluminium Institute
- Business Council of Australia.

These platforms allow us to keep up to date with the most recent changes to regulation and policy within our industry and to increase our understanding of other organisations' views and approaches to managing issues. They are also a forum to expand our knowledge, share our insights and challenge our own thinking with different perspectives. They enable collaboration on ESG and other matters that are important to our industry, and can be a catalyst for innovation.

In line with Alumina's Code of Conduct and Anti-Corruption Policy, Alumina does not donate to any political party or aligned interest group.

Alumina actively monitors our own compliance. We are not required to report under the *Modern Slavery Act* 2018, but Alcoa of Australia (the entity covering AWAC's Australian operations) will submit a statement on behalf of the joint venture (see further page 48).

Tax transparency

Why this matters

As an Australian listed business, and with our AWAC operations creating value in a number of locations around the globe, we have a responsibility to comply with all applicable tax requirements and report on these transparently.

How we manage this

We manage our tax requirements in line with our values as a business, and carefully follow our financial and ethical policies and guidelines. For details of Alumina's income tax payments during FY19 please refer to the 2019 Annual Report section 8.

Although outside the reporting period, we note the Australian Tax Office recently assessed taxes in relation to historical alumina sales by AWAC. The ATO is also expected to assess administrative penalties in 2020.

We monitor AWAC tax payments primarily through our participation in the boards of the AWAC entities (see page 42).

Our full statement to the ASX on this matter 'Alcoa of Australia Ltd Taxation Assessments' can be found here: **https://www.aluminalimited.com/announcements/**

Executive remuneration

Why this matters

Our small, focused team plays an important role in Alumina's success. Our executive remuneration structure helps us to attract and retain the right talent, and incentivise our team to deliver ongoing strong performance for our shareholders in line with our values and goals as a business.

How we manage this

Alumina's remuneration structures have been designed to reflect the unique nature of the company, the role of the executives, and their focus on long-term value creation for shareholders. They are designed to accommodate the fact that we operate in an industry where our financial results are heavily determined by global commodity prices. The process for determining remuneration, and stakeholder involvement in the remuneration process can be found in further detail in Alumina's remuneration policy.

The FY19 Remuneration Report reviews Alumina's remuneration strategy, policy and outcomes, including full details of the CEO and Senior Executives' objectives, and an assessment of performance against those objectives. The report can be found on page 36 of the 2019 Annual Report.

Our approach to sustainability

This chapter builds on Alumina's broader approach to governance, outlined in the previous chapter on page 29.

Why this matters

Although we do not have operational control of AWAC, Alumina's social licence to operate is inextricably tied to AWAC's performance in managing sustainability risks and opportunities. When AWAC is successful in creating positive impacts and minimising negative impacts, we share in that success. If AWAC fails to meet societal expectations, our reputation also suffers. The value our shareholders derive depends upon AWAC creating value for all its stakeholders – such as contributing to the local economies where it operates, preventing environmental harms, and protecting the health and safety of employees and communities.

Through our engagement with AWAC, Alumina has a significant role to play in guiding good outcomes for society and the environment.

How we manage this

Our Board has ultimate responsibility over all sustainability matters at Alumina, and are involved in the development and integration of Alumina's values, policies, and goals.

Environmental, social and governance (ESG) topics are of increasing interest to the investment community and our other stakeholders. To better reflect the importance accorded these topics by Alumina, we have established a Sustainability Committee, commencing 1 January 2020. The committee comprises five Non-Executive Directors with experience and knowledge in environment, health and safety, and sustainability, either directly or as part of their operational responsibility. It meets at least quarterly to assist and advise specifically in relation to ESG matters.

The Sustainability Committee Charter sets out its responsibilities to:

- Review and approve relevant sustainability strategies, policies and position statements including on climate change, health and safety, environment, and social and community matters and issues
- Monitor performance against health and safety, climate change and sustainability targets
- Review and provide advice on proposed long-term targets and aspirations for environmental, social and governance performance
- Consider the appropriateness of health, safety and environment frameworks and management systems
- Review and approve sustainability reports
- Consider community, climate change and broader sustainability concerns.

Alumina's social licence to operate is inextricably tied to AWAC's performance in managing sustainability risks and opportunities. When AWAC is successful in creating positive impacts and minimising negative impacts, we share in that success.

The Committee will provide a platform for more focussed review of material sustainability issues. It is the responsibility of the senior executive team, led by the Chief Executive Officer Mike Ferraro, to ensure that the appropriate sustainability information is obtained from our joint venture partner and presented to the Committee and the Board. The Committee will also on occasion commission independent advice on matters beyond its own expertise. We believe the Committee will mark a significant step forward in our governance of ESG.

Our other Board Committees also consider ESG matters where relevant; for example, the Audit and Risk Management Committee assess potential sustainability risks and opportunities for shareholders through the Risk Management Framework.

Executive-level responsibility for economic, environmental, and social topics sits with our CEO.

We have welcomed the renewed commitments to sustainability that Alcoa has made during the reporting period. Most notably:

- 'Advance sustainably' became one of the company's three strategic priorities.
- Alcoa joined the International Council on Mining and Metals (ICMM) , which is focused on enhancing the industry's contribution to society with safe, fair and sustainable practices.
- Alcoa has established a Greenhouse Gas Strategy Group, which includes representatives from legal, accounting, environment, procurement, technical, strategy and operations and reports periodically to the Alcoa Executive Team. The Group sets sustainability focus areas, including assessing climate-related risks and opportunities.

We look forward to enhanced engagement with Alcoa on sustainability topics over the coming years.

You can read more about the approach to managing sustainability for AWAC on **page 44.**

Climate risk

Why this matters

Climate changes pose risks to our business, the broader economy and society. Alumina acknowledges the physical impacts of climate change, such as decreased rainfall, water scarcity and rising sea levels; and the economic and regulatory risks to business due to the transition to a low carbon economy.

We anticipate opportunities as well as risks, such as increasing demand for aluminium for more energy-efficient buildings, fuel-efficient vehicles, and sustainable food and beverage packaging.

As a partner in an energy- and emissions-intensive business, Alumina has a role to play in supporting the transition to a zero-carbon economy, and preparing our business for the impacts of climate change.

How we manage this

Our Climate Change Position statement formally outlines our commitment to limiting the negative impacts of climate change. The Board has oversight through the Sustainability Committee, which monitors climate change issues and risks. In 2019, our Directors actively built their capacity in relation to climate risk by participating in two bespoke workshops prepared by external consultants, covering topics including climate science, policies and targets, energy and carbon markets, corporate approaches and global climate change negotiations.

We have been engaging with Alcoa in relation to AWAC's climate strategy over a number of years. Alumina's future plans to support its ongoing engagement include to:

- Assess our climate disclosures against the requirements of the Task Force on Climate-related Financial Disclosure (TCFD), and work to address identified gaps.
- Consider the impact of carbon pricing under different climate scenarios including a 2°C-aligned scenario.
- Identify physical risks to AWAC's assets, operations and supply chains under different scenarios, and consider how these might be integrated into the risk management system to improve business resilience.
- Research opportunities for energy and emissions abatement for AWAC operations. This may include energy efficiency opportunities, onsite and offsite renewable energy sources, innovative technologies, and carbon offsets.
- Work with AWAC to formulate appropriate GHG emission targets for AWAC.
- Explore how an internal carbon price could be used in our investment projects and strategic decision-making processes.
- Help prepare our business for regulatory changes.

You can read more about AWAC's approach to waste, tailings and residue management on **page 56** and on the **Alcoa website**.

Tailings

Why this matters

Alumina actively undertakes its own research into a range of material topics to support its engagement with Alcoa. We are partly guided in this by the interests of our investors. A recent example of this is a focus on the management of tailings facilities, in the wake of high-profile incidents involving other mining operators that caused significant social and environmental harms. Alumina is acutely aware that this risk is prevalent in both operational sites and those in closure.

How we manage this

Alumina's executive has taken a keen interest in the risks associated with tailings dam safety management and the Alumina board is aware of its accountability for this existential threat and the need to undertake and demonstrate appropriate due diligence. Tailings dam safety management is a standing agenda item for each Alumina board meeting.

Alumina regularly reviews key technical reports and other communications from Alcoa on dam safety management. It has also engaged external experts to support its understanding and analysis of dam safety risk.

Active engagement with Alcoa is undertaken in a number of ways, including at biannual Strategic Council meetings.

Contents

How we engage with Alcoa and AWAC

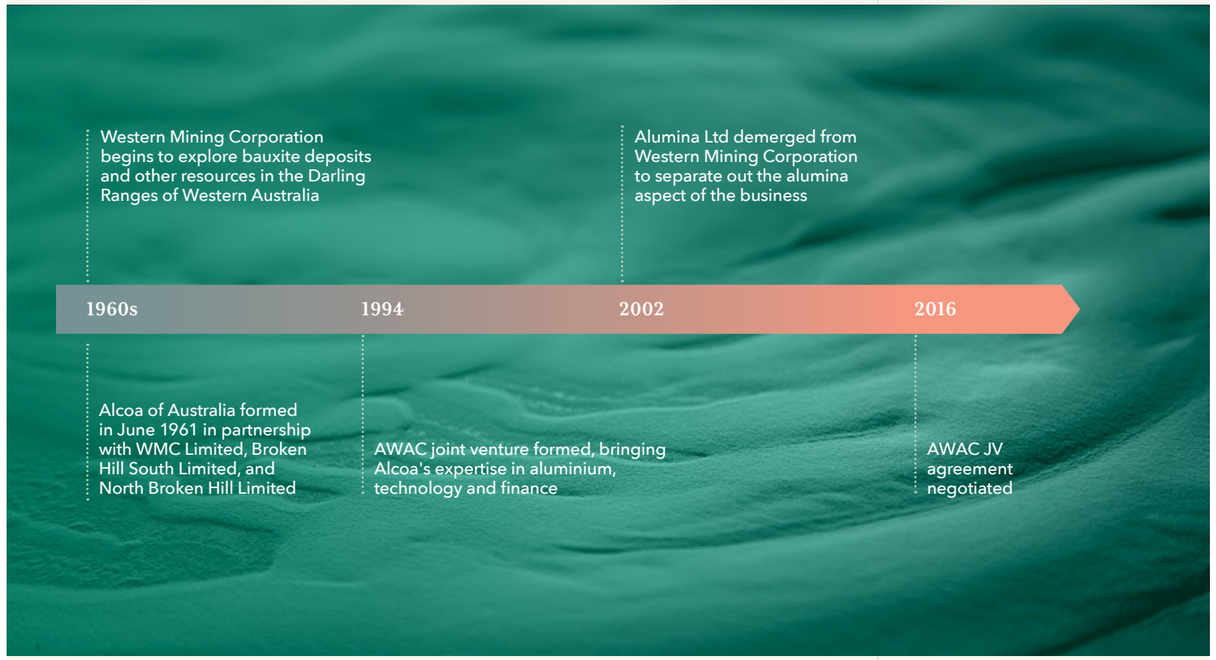
Why this matters

Our role as the non-operating joint venture partner is to contribute to AWAC's strategic direction and management of key risks and opportunities, by bringing informed and useful views. We also contribute to sound governance by providing an additional layer of accountability and scrutiny of AWAC's performance.

There are risks to our position a non-operator joint venture partner. While we share in AWAC's success, we are also exposed to its failings, yet we do not have direct control of either. Sound governance, strong relationships and ongoing engagement are critical to understanding, influencing and ultimately managing the risks and opportunities at AWAC for the benefit of our shareholders.

Our shared history

Our relationship with Alcoa is long-standing and has evolved over decades.



Contents

Alumina's engagement with Alcoa and AWAC under the joint venture agreement is guided by our risk management and governance structures, outlined on page 29. We engage via several formal and informal pathways:

Strategic Council

The Strategic Council is AWAC's leading governing body, and the principal forum for Alcoa and Alumina to provide direction and counsel to the Enterprise Companies within AWAC concerning strategic, policy and sustainability matters. The Council membership is proportional to ownership interests.

Alcoa		Alumina	
Position	**Held in 2019 by**	**Position**	**Held in 2019 by**
Chief Executive Officer	Roy Harvey (Chair)	Chief Executive Officer and Deputy Chair	Mike Ferraro
Chief Financial Officer	William Oplinger	Chief Financial Officer	Grant Dempsey
Chief Operating Officer	John Slaven		

The Council acts as a consultative forum more than a decision-making body, with a focus on strategy and policy. The Council meets bi-annually; it does not have a standing agenda but reviews the current key risks and opportunities; either party can put forward agenda items. The strategic issues under review are often significant – for example relating to investment or divestment – and discussion may continue over a series of meetings. Alumina sometimes seeks third-party expert opinions to inform our positions.

As of June 2020 (following the reporting period), Alumina has requested that environmental, social and governance topics, including climate strategy, be discussed by the Strategic Council at least annually.

A key function of the Strategic Council is to undertake reviews of AWAC's risk management system and the risks facing each of AWAC's enterprises. Risks are reviewed on the basis of impact vs likelihood and vulnerability vs velocity, if not mitigated by the appropriate controls. The risks are assessed and all changes from previous assessments are noted. When required, the Strategic Council may also request the assistance and advice of experts and advisors from Alcoa or Alumina to provide input on specific issues and risks arising.

While the Strategic Council will principally look to the operating management of the Enterprise Companies for information about the businesses, the Strategic Council, at the request of the Chairman or Deputy Chairman, can also form advisory committees of representatives of both Alcoa and Alumina to assist the Strategic Council.

As the operator, Alcoa is responsible for communicating, delegating and following up on actions resulting from Strategic Council meetings.

Business unit representation

Up until September 2019, AWAC operated through two major business units: bauxite mining and alumina refining. Alumina senior executives attended quarterly business unit meetings to discuss a range of operational issues. With the exception of health and safety, ESG topics were not typically a focus of these meetings.

In September 2019, Alcoa eliminated these business units. Individual sites now report directly to the Chief Operating Officer (COO), while sales, procurement and other commercial capabilities have been consolidated at an enterprise level. The restructure was designed to create a leaner, more integrated, operator-centric organization, increase connectivity between the Company's plants and leadership, and ensure a continued focus on safety as a top priority.

Since the restructure, Alumina's participation in business unit meetings has been replaced by three channels:

1. A quarterly meeting with the Alcoa COO, attended by several executives from both organisations. These meetings have a strong focus on operations, and also cover ESG topics including environmental impacts and health and safety. They are primarily an opportunity for Alumina to gather information and ask questions.
2. A quarterly meeting with Alcoa's Chief Commercial Officer, attended by several Alumina employees. These meetings are focused on the sale of our commodities, and on the cost of key inputs (chiefly caustic soda and energy). These discussions also are primarily an opportunity for Alumina to gather information and inform our view of markets, risks and exposures.
3. Regular discussions with Alcoa's Vice-president, Alcoa Sustainability, specifically to gather information on ESG topics.

AWAC entity representation

Alumina has proportional representation on the boards of all AWAC enterprise companies (see page 40). Each board comprises two Alumina and three Alcoa members; we are represented by our CEO and CFO.

Alumina participates in quarterly meetings of the Alcoa of Australia board, discussing entity-level performance, and governance and compliance matters including risk management and ESG topics. Similarly, we attend meetings of the board of Alcoa World Alumina Brasil, bi-annually up until September 2019, and now annually.

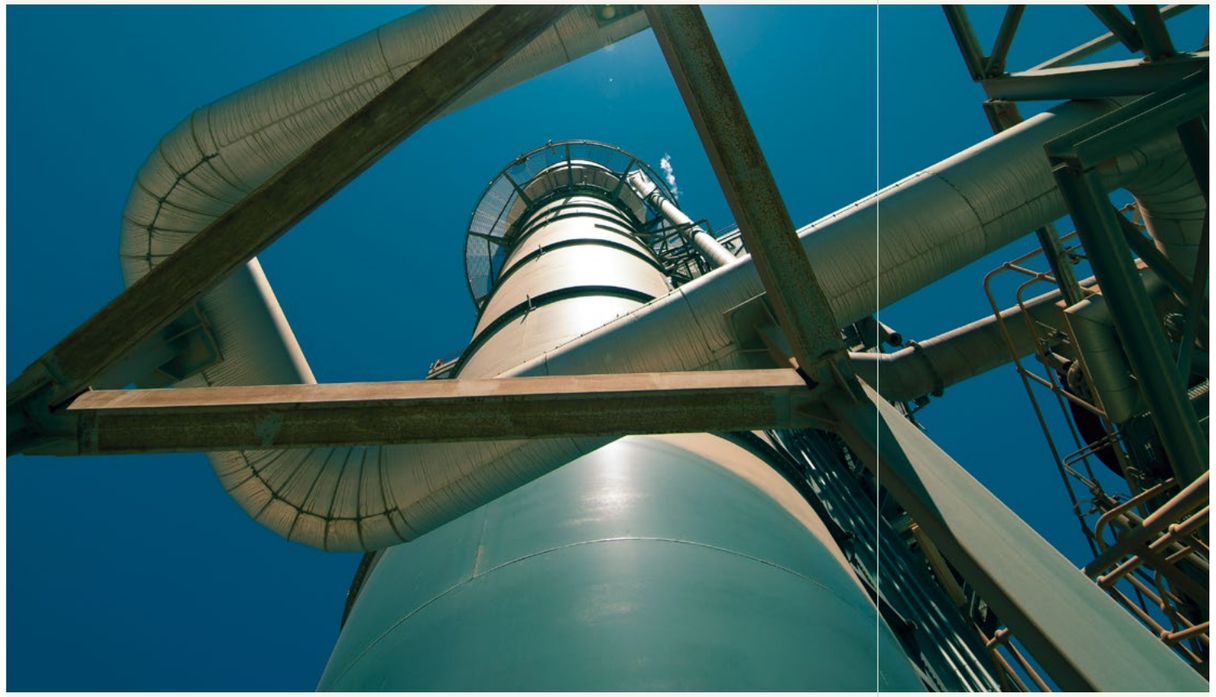
Site visits

Alumina aims to send representatives to a selection of AWAC operations on an annual basis. These visits provide an opportunity engage with site management, review operations and ask questions, and hold meetings with representatives of local communities. They help us to build relationships with key managers and to deepen our understanding of operations.

Direct engagement

The CEO of Alumina speaks regularly with the CEOs of Alcoa Corporation and Alcoa of Australia to discuss current topics.

Much of Alumina's engagement with Alcoa is issue-specific, with direct engagement between the most relevant personnel from each organisation. Recent areas of focus have included the management of tailings facilities, and the approach to climate change and greenhouse gas emissions.



AWAC

The second half of this report addresses how Alcoa, as operator of AWAC, manages topics that Alumina has identified as material. Alcoa's management approach is consistent across all its operations and is not differentiated for AWAC. However, where relevant, we have identified any aspects that are specific to AWAC. Further detail on Alcoa's approach and performance can be found in its 2019 Sustainability Report.

Performance data in these chapter and in the data tables at the back of this report relate to AWAC only, on a 'full facility' basis, except where otherwise noted.

Contents

Governance

Strong, dynamic and diverse leadership provides the foundation for organisational culture and financial performance through robust decision making, strategy and risk management. It is essential to maintaining a social licence to operate with internal and external stakeholders.

AWAC has established specific governance functions to identify and effectively address its corporate, social and environmental risks and opportunities, underpinned by clear, transparent channels of communication between Alcoa, Alumina and relevant external stakeholders to promote considered, effective and timely decision making. You can read more about these on page 39.

This section provides an overview of Alcoa's own governance functions, as operator of AWAC.

Business integrity

Why this matters

AWAC's stakeholders need to have confidence that its actions and decisions are taken in accordance with its values. This means having appropriate governance mechanisms in place to promote the highest level of ethics and transparency throughout all of AWAC's actions and operations, including the disclosure of associated processes, performance and business risks to shareholders.

How this is managed

Alcoa's Code of Conduct is AWAC's roadmap for professional conduct. It applies to all AWAC staff, and details the parameters within which the organisation operates, defining AWAC's culture, values and expectations.

The Code of Conduct and broader policies relating to AWAC are available to each employee through Alcoa's intranet. The Code is provided in eight languages for AWAC's global workforce.

Alcoa delivers Code of Conduct training to AWAC employees either online or in a classroom environment. The training references key policies and procedures and covers specific topics of importance, which are updated on a regular basis. In addition, all of AWAC's salaried employees complete training on anti-bribery, data privacy and avoidance of trafficked labour.

The Code of Conduct and broader policies relating to AWAC are available to each employee through Alcoa's intranet. The Code is provided in eight languages for AWAC's global workforce.

Reporting and investigating integrity issues, concerns and non-compliances

Alcoa's stockholders and employees can communicate critical concerns to Alcoa's Board of Directors through a variety of channels including by mail, through stockholder engagement, and through union representation or work councils. During the reporting period, AWAC received a request from the Church of England to disclose AWAC impoundments, which was then subsequently disclosed on both the Alcoa and Alumina websites.

Alcoa also maintains a confidential Integrity Line, which is accessible 24 hours a day, seven days a week and available in multiple languages. In 2019, the Integrity Line fielded 203 calls. Of these, 13 percent resulted in disciplinary action and 51 percent were inquiries or other matters that did not require investigation or substantial follow-up. The majority of calls (77 percent) were employment related, with the remainder related to business integrity, health and safety, trade and general inquiries.

The Alcoa Ethics and Compliance team travelled to AWAC locations in Africa and Brazil during the reporting period to deliver in-person training on its Code of Conduct, policies and procedures, anti-corruption principles and its expectations of supervisors.

Other governance policies that drive ethical and responsible business practice at AWAC include:

- Alcoa's Corporate Governance Guidelines
- Anti-Corruption Policy
- Human Rights Policy
- International Trade Compliance Policy.

Government compliance and engagement

Why this matters

AWAC operates in a broad set of geographies, each with specific requirements and policies pertaining to AWAC's operations, compliance and conduct within its communities. Effective and transparent engagement with relevant governments and regulators ensures AWAC understands current and emerging regulatory and policy impacts and is able to implement necessary compliance processes. This protects the business from regulatory risks and ensures AWAC positively contributes to the communities in which it operates by meeting relevant requirements.

How this is managed

AWAC's legal risk and compliance is managed by Alcoa's general counsel and its Legal Department, working closely with other resource functional areas that are tasked with monitoring and ensuring compliance. This includes identifying and maintaining relevant information in specific areas, such as Environmental, Health and Safety; Human Resources; and Ethics and Compliance.

All government engagement conducted by AWAC is guided by the Alcoa Stakeholder Engagement Framework. A key focus of recent engagement has been greenhouse gas and energy policies. Via Alcoa, AWAC engages with stakeholders including elected officials, government agencies and NGOs, to ensure fair and effective policies and regulations.

Political contributions

Alcoa's Political Contributions Policy prohibits the use of company funds, property, services or other items of value for political purposes. Rare exceptions may be made, such as favouring or opposing a ballot or referendum vote that can impact Alcoa.

Contents

Industry relations

Why this matters

Industry associations provide a critical forum for dialogue and influence towards a sustainable, resilient aluminium, alumina and bauxite industry. Through these associations, AWAC is able to collectively advocate on behalf of the industry, as well as sharing and promoting leading practices and innovations.

How this is managed

In a significant step, Alcoa was accepted as a member of the International Council on Mining & Metals (ICMM) in 2019. To retain membership, Alcoa is required to meet a range of social, environmental and governance requirements through a comprehensive set of performance expectations.

AWAC, via Alcoa, is a member or participant of the following organisations:

- Aluminium Stewardship Initiative
- Australian Aluminium Council
- Brazilian Aluminum Association
- European Aluminium
- International Aluminium Institute
- ICMM
- The Aluminum Association.

For Alumina's associations memberships, see page 34.

Tax transparency

AWAC operations create value in a number of locations around the globe. Tax transparency helps AWAC to builds trust with its local communities and governments and clearly identify the economic benefit flowing from AWAC's operations.

How this is managed

Alcoa observes all applicable tax rules and regulations in the jurisdictions where AWAC has a tax presence. Alcoa works closely with local governments to ensure it operates with transparency and participates in current audit initiatives to shorten audit cycles and reduce tax risk.

Alcoa has a number of procedures to ensure its senior management understands the tax consequences of business decisions. Alcoa's tax professionals partner with its businesses and resource units to satisfy all tax obligations; develop and implement tax strategies to support business goals and maximize stockholder value; mitigate tax risk; and develop sustainable, arms-length pricing on intercompany transactions.

See also **Alcoa of Australia's Tax Transparency Report**

Supply chain governance

Why this matters

AWAC relies on a broad global supplier base to provide it with the services and resources necessary for its operation. Due to the diversity and geographical spread of its suppliers, there is an inherent degree of complexity in ensuring that they universally meet AWAC expectations around business conduct and sustainability. To address this, AWAC seeks to establish strong, trusted relationships with each of its suppliers to encourage responsible behaviour, and has implemented a range of accountability and checks to assess alignment with AWAC's ethical and sustainability expectations.

How this is managed

The major inputs required for AWAC's operations include raw materials such as caustic, coke and lime, energy, fuel and water. All procurement is now governed by **Alcoa's Global Supplier Sustainability Program**, which was introduced in 2019 to give greater insight into the sustainability performance of AWAC's suppliers and improve the management of its supply chain risk.

To deliver this program, Alcoa has partnered with EcoVadis to assess selected suppliers against 21 criteria across the categories of environment, labour and human rights, ethics and sustainable procurement.

Supplier assessment criteria

Environment
- Energy consumption and greenhouse gases
- Water
- Biodiversity
- Local and accidental pollution
- Materials, chemicals and waste
- Product use
- Product end of life
- Customer health and safety
- Environmental services and advocacy

Labor and human rights
- Employee health and safety
- Working conditions
- Social dialogue
- Career management and training
- Child labour, forced labour and human trafficking
- Diversity, discrimination and harassment
- External stakeholder human rights

Ethics
- Corruption
- Anticompetitive practices
- Responsible information management

Sustainable procurement
- Supplier environmental practices
- Supplier social practices

Alcoa uses a separate third-party supplier due-diligence program to further manage risk in its supply chain related to the areas of anti-bribery and corruption, trade compliance, child and slave labour, criminal history, human trafficking and conflict minerals. This program involves suppliers with an Alcoa expenditure higher than US$50,000 per year that are based in a high-risk country and all suppliers with an Alcoa expenditure above US$1 million per year.

Where AWAC participates in joint venture projects that are not operated or managed by Alcoa and/or relies on supply chain partners, Alcoa reviews and monitors the compliance programs of those significant joint ventures to ensure those operations act responsibly and exercise ethical business practices in compliance with AWAC and Alcoa guidelines. These reviews are conducted in collaboration with the joint venture partner and focus on key compliance program components, including:

- Commitment from senior management;
- Code of conduct, anti-corruption and other compliance policies and procedures; and
- Ethics training, confidential reporting and investigations.

Performance over 2019

In 2019, more than 300 corporate groups covering nearly 600 suppliers (7 percent of Alcoa's global supply base) participated in the Global Supplier Sustainability Program. Of these, 96 percent met Alcoa's minimum requirements. The average overall score was 45.6 out of 100, which is 7.5 percent above the EcoVadis benchmark. AWAC-specific data is not available.

Further information on how Alcoa delivers on ethical and responsible procurement practices include:

- Supplier Standards
- Ethics and Compliance
- Human Rights Policy

Alcoa has partnered with EcoVadis to assess selected suppliers against 21 criteria across the categories of environment, labour and human rights, ethics and sustainable procurement.

Human rights and modern slavery

Why this matters

Respecting the human rights, cultures and values of our employees and the communities in which it operates is a vital consideration for AWAC's social licence to operate. It is important that people linked to AWAC operations and supply chains are able to operate in a manner consistent with our standards and values.

How this is managed

Alcoa's commitments to support the United Nations Guiding Principles for Business and Human Rights and the International Labour Organization Core Conventions are included in its Human Rights Policy, published in early 2019.

Alcoa's Human Rights Policy operates in conjunction with a number of other key policies, including the Alcoa Code of Conduct and the Supplier Standards, which explicitly indicate respect of human rights.

Alcoa undertook a risk assessment of the human rights and modern slavery risks in AWAC's Western Australia operations and supply chains during 2019.

Also in 2019, Alcoa completed human rights risk assessments at the AWAC-owned Juruti mine (Brazil) and San Ciprian refinery (Spain). The assessment results did not show any areas of very high concern. However, the results identified potential risks related to corruption and contractor labour conditions in Brazil and limited surveillance of contractor compliance with human rights in Brazil and Spain. Alcoa is looking into these issues to ensure that its internal systems are strong to prevent any human rights abuses in those countries.

AWAC reported no human rights non-compliances during the reporting period.

Human rights due diligence

Alcoa also completed human rights due diligence—which is more in-depth analysis and stakeholder engagement—at two AWAC mines and three AWAC refineries in Western Australia and its Alumar refinery in Brazil during 2019. The Alumar site was selected due to the region's higher level of intrinsic risk, and the Western Australia sites due to their significant contributions to AWAC's financial performance.

At AWAC's Western Australia operations, the due diligence identified improvement opportunities for greater consistency with the globally recognized standard of Free Prior and Informed Consent, as well as impacts on the environment and cultural traditions.

The due diligence at AWAC's Alumar location indicated risks related to impacts on surrounding communities and improvements regarding the management of critical suppliers. In response, Alcoa conducted onsite visits and provided human rights guidance for select suppliers in 2019.

The identified risks for both operations have been integrated into an action plan that is overseen by the Alcoa Human Rights Council. Progress is reported to high-level management on a periodic basis.

Future plans

Incorporating the human rights program into a comprehensive management system is the Alcoa Human Rights Council's priority for 2020. Systematisation of due diligence practices, reinforcement of grievance mechanisms, and increased internal and external awareness will be at the core of the working plan and will have a direct bearing on AWAC locations.

In 2020, Alcoa will further enhance its human rights practices based on the principles and position statements of the International Council on Mining and Metals. Also in 2020, Alcoa of Australia will release its first Modern Slavery Statement in compliance with Australia's *Modern Slavery Act* 2018.

Respecting the human rights, cultures and values of our employees and the communities in which it operates is a vital consideration for AWAC's social licence to operate.

Executive remuneration

Why this matters

Providing competitive remuneration and benefits enables AWAC to attract and retain high quality, motivated leaders and staff. AWAC prides itself on its fair, performance-based remuneration approach, from its new joiners to its executive team.

How this is managed

Alcoa's Compensation and Benefits Committee reviews its executive compensation and pay-for-performance practices, with the goal of motivating Alcoa's executive leadership team and increasing stockholder value, while ensuring that unnecessary risk is appropriately mitigated.

Alcoa's executive compensation philosophy is based on three guiding principles:

1. **Targeted at median:** Total compensation is targeted at the median of the market, with cash and equity incentive opportunities that aim to motivate and reward exceptional performance if goals are achieved at higher than target levels.
2. **Equity-dominant:** Equity is the most significant portion of total compensation.
3. **Diversified metrics:** Cash incentive (IC) and long-term incentive (LTI) metrics are used to focus management's actions on achieving the greatest possible positive impact on financial performance without creating undue risk.

Performance over 2019

In 2019, the Compensation and Benefits Committee:

- Continually reviewed Alcoa's executive compensation elements against those used in the applicable peer groups.
- Implemented an IC plan that included driving business unit performance.
- Implemented a continued equity mix of 60 per cent performance-based restricted share units (at target), 20 per cent stock options, and 20 per cent time-based restricted share units.

Cybersecurity

Why this matters

Cyber-attacks and security breaches may threaten the integrity of AWAC's intellectual property and other sensitive information, disrupt business operations, expose AWAC to potential liability, and result in reputational harm and other negative consequences.

How this is managed

A range of policies and procedures have been adopted by AWAC to enhance the cybersecurity of the organisation.

As AWAC's managing joint venture partner, Alcoa complies with the US-EU Privacy Shield Framework regarding the collection, use, and retention of Personal Data transferred from European Union member countries (see www.privacyshield.gov/list). For more information, see Alcoa's Online Privacy Notice or other privacy notices published by the company.

Contents

Community

AWAC's profitability and its social licence to operate are directly tethered to the communities in which it operates which reflects its critical role in mitigating any adverse impacts and delivering positive outcomes to these communities and broader society.

Local commitment with communities

Why this matters

Transparent, clear and open communication with stakeholders is crucial to establish trust and support with AWAC's local community members. As a custodian of the sites where it operates, AWAC understands the importance of effective engagement with local communities and management of economic, social, cultural and environmental impacts.

AWAC has found that its communities are generally interested in:

- Economic contribution, including employment opportunities
- Land use
- Environmental impact – climate change, water availability
- Community health and safety matters
- Support for local initiatives in community development and education.

How this is managed

AWAC strives to respond to stakeholder concerns, issues and opportunities early, so that its stakeholders can be brought along for any subsequent decision-making. For a list of AWAC's stakeholders, see page 19.

AWAC's stakeholder relationships are both formal and informal. With customers, suppliers, governments, employees and stockholders, AWAC typically has formalised, contractual or even legally mandated channels for engagement. AWAC's interaction with other stakeholders is typically less formalised and requires attention to ensure that it is nurtured on a regular basis.

All community engagement conducted by AWAC uses the Alcoa Stakeholder Engagement Framework. This provides a systematic process to first identify appropriate stakeholders and then engage with them in the most effective manner, ensuring transparent and ongoing dialogue.

As part of the Framework, AWAC locations are encouraged to form community consultation forums comprising a relevant cross-section of local stakeholders. These forums provide an opportunity for regular two-way communication between AWAC representatives and community members on topics of mutual interest. AWAC also engages with stakeholders, primarily local communities and non-governmental organisations, through Alcoa Foundation globally and Instituto Alcoa in Brazil. The method of engagement varies by location, but the aim is to understand stakeholder needs and contribute to the social, economic and institutional development of our host communities.

For AWAC to better understand the perceptions and expectations of host communities and key stakeholders regarding its Western Australia operations, a perception survey was undertaken in 2019. More than 800 stakeholders were engaged, including community members, through telephone and online surveys and in-depth interviews. The survey identified both strengths and opportunities for improvement, which AWAC's Western Australian business will consider throughout 2020.

Performance over 2019

The following key issues were raised by, or discussed with, stakeholders in 2019.

2019 stakeholder issues

Location	Issue	Action
Anglesea, Australia	Following the permanent closure of AWAC's Anglesea operations in 2015, there has been significant interest in the future of the site, including the decommissioning, remediation and land planning processes underway. In May 2019, AWAC and Eden Project International (EPI) released the Eden Project Anglesea Concept for a world-class eco-tourism attraction within the former mine site.	Community engagement is a key component of the Anglesea project. AWAC's strategic engagement program aims to keep the local community and key stakeholders informed of, and engaged in, AWAC's activities to ensure feedback from the community is considered in decision-making. There are currently two key issues to be resolved before the project can progress: 1. Agreement on the strategy to fill and maintain the water body and a 2. determination of the planning authority and a defined rezoning process.
Kwinana, Australia	Since the Western Australian Planning Commission (WAPC) adopted the Kwinana air-quality buffer in September 2010, there have been litigation and questions on the legitimacy of the buffer and land uses in the area.	AWAC supports compatible development in the Mandogalup area with adequate separation between industry and residential development. During 2019, AWAC supported a Special Control Area application that was led by the Kwinana Industrial Council. The application advocated the WPAC apply additional development conditions in the Kwinana Industrial Area.
Western Australian Mining and Refining Operations	AWAC successfully negotiated a new Enterprise Bargaining Agreement (see further page 65).	AWAC's direct engagement with AWU members included good faith negotiations, briefings and written communications. Throughout 2019, AWAC also communicated with employees and engaged stakeholders to inform them of the status of the issue as developments occurred.
Western Australian Mining Operations	As part of AWAC's ongoing work to establish connection to, and create sustainable value for, the communities where it operates, AWAC continued to consult with current and future communities to understand and address their concerns, where practical.	AWAC is a key stakeholder in Dwellingup Futures, a consultation group comprising local and state government, industry and community group representation. In the Larego mine region, construction commenced in preparation for 2021 mining. Discussions continued with future neighbours and key stakeholders. Ongoing engagement also continued with key community stakeholders in Jarrahdale as AWAC develops plans for future mining that will start around 2025 to the south of the town in the Myara North mine region.
Juruti, Brazil	Since 2018, the Federal Public Prosecution of Santarém and the Federal Court of Santarém prohibited AWAC from carrying out any mining and community relations activities in the Lago Grande region in Santarém.	In 2019, AWAC continued to engage with key stakeholders to keep them informed about the situation and to seek community approval to restart our mining exploration.

Contents

2019 stakeholder issues

Location	Issue	Action
Juruti, São Luís, Brazil	The collapse of another unrelated company's tailings dam in Brumadinho, Minas Gerais, raised concerns among local stakeholders in AWAC's Brazilian communities about the management of bauxite mine tailings and residue storage areas.	AWAC expanded the number of government and community stakeholders that it invited to its Brazilian operations to further detail its tailings and residue storage management processes and explain the differences between AWAC's processes and those used in Brumadinho. AWAC also increased its dialogue with stakeholders by hosting several site visits and community consultative forums. In addition, AWAC engaged with local authorities on response plans.
Juruti, Brazil	In October 2019, the Association of Communities of the Juruti Velho Region (ACORJUVE) issued a letter preventing AWAC from developing social activities in Juruti Velho and surrounding communities. This followed ACORJUVE's decision to not follow an agreed-upon path to create a foundation to manage the royalties that AWAC pays to ACORJUVE to ensure transparency and good governance.	AWAC held a meeting with the National Institute of Colonization and Agrarian Reform (INCRA) and the state and federal prosecutor offices regarding the situation. INCRA has taken a firm position to complete the foundation process and also maintained authorisation for AWAC to carry out environmental control projects.
Juruti, Brazil	The Prudente community was concerned that one of its access roads would be blocked because of its location near AWAC's new authorised mining area. The community asked for support to build an alternative road.	AWAC signed an agreement with the city and received an environmental licence authorising the road's construction, which began in 2020.
São Luis, Brazil	On two occasions, residents of the Coqueiro community reported a strong odour similar to burnt oil, which was more intense at night. Residents showed adverse symptoms, including nausea and headaches.	The day following receipt of the first complaint, AWAC sent representatives to the community to obtain additional information. As a result of the investigation, AWAC: – Conducted a noise measurement that showed sound pressure levels around the Alumar facility were in compliance with legal limits. – Checked the coal-burning process and purchased a different type of coal to reduce spontaneous combustion. – Established a dedicated team to quickly address spontaneous combustion of the coal. – Analysed vegetation identified by the community as being impacted by our operations and found they were not impacted by Alumar's operations. – Visited the community during the dry season to detect particulate matter. None was found.

Indigenous peoples

AWAC respects the diversity, cultures, customs and values of Indigenous Peoples (tribal peoples, first peoples, native people and aboriginal people) and acknowledges their needs, concerns and aspirations regarding their heritage and traditions. For more detail on Alcoa's position see its Indigenous Peoples Statement.

AWAC currently operates in areas home to indigenous peoples including:

- Australia
- Suriname
- Juruti and Brazil

In 2020, Alcoa Australia has launched its first Reconciliation Action Plan, pledging to use the nationally-recognised framework to step up its efforts to build meaningful outcomes for Aboriginal and Torres Strait Islander people and the company. See the Reconciliation Action Plan.

Economic contribution

Why this matters

Simply providing local employment is no longer sufficient for organisations to fulfil their economic obligation to their communities. AWAC understands this and has sought to diversify its approach to its local economic contribution to ensure its communities are effectively uplifted.

How this is managed

A key pillar of Alcoa's sustainability strategy is to create sustainable value for the communities in which it operates. For AWAC, this translates to a commitment to stimulate economic activity at local and regional levels to deliver improved outcomes for employees and communities. This is delivered through providing stable, fair-paying jobs, procuring goods and services from local suppliers when possible, paying income and other taxes, and investing in community infrastructure and initiatives.

Alcoa's long-term goal for sustainable value creation is to reassess the implementation of key stakeholder engagement tools by 2020 and define shared value creation opportunities to be implemented by 2025 and 2030. Alcoa has committed to implementing a comprehensive social management system across its locations by 2022. This will allow AWAC to define metrics and measure progress in a range of socio-economic indicators that are relevant to interactions with its hosting communities.

2019 AWAC economic value:

- Accounts payable, trade $US490.5 million
- Accounts payable, related party (I) $US57.6 million
- Accrued compensation and retirement costs $US185.9 million
- Taxes, including taxes on income US$58.3 million.

AWAC also contributes directly to the economic development of its operating regions in the form of community investment via the Alcoa Foundation. In 2019, the Alcoa Foundation contributed $US6 million in community investment.

A key pillar of Alcoa's sustainability strategy is to create sustainable value for the communities in which it operates

Contents

Environment

The mining, refining and distribution activities undertaken by AWAC have a direct impact on the environments in which it operates and have broader environmental, social and economic consequences. To limit adverse environmental impacts and maximise positive outcomes, AWAC relies on considered, well-planned and well executed environmental management across its global operations.

Energy efficiency and greenhouse emissions

Why this matters

The production of alumina and aluminium is energy intensive and produces significant greenhouse gas emissions. Effective management of AWAC's energy use is therefore vital to limiting adverse global impacts associated with emissions of greenhouse gases and to protecting AWAC's commercial viability through reduced energy consumption and therefore costs.

How this is managed

Alcoa's focus and action on climate change was refined in 2018 when its Executive Team commissioned a Climate Strategy team across the business. A team of high-level employees reviewed the strategy in 2019 and introduced five key strategic pillars, four of which apply to AWAC and are detailed as per the adjacent.

1 Carbon accounting

Alcoa maintains an auditable inventory of carbon emissions to monitor progress against targets and report transparently to different stakeholders. Alcoa has also developed carbon footprint calculations for most of its products.

2 Optimisation of energy consumption and carbon credits trading

Alcoa is working to increase use of low-impact energy sources by incorporating carbon exposure costs in its economic models and by improving the energy efficiency of its operations.

3 Carbon reduction in operations and technology development

Programs aimed at reducing greenhouse gas emissions.

4 Advocacy

Through industry associations and direct contact, Alcoa and AWAC engage with global stakeholders on the issue of greenhouse gases to ensure fair and effective policies and regulations. These stakeholders include elected officials, government agencies and NGOs.

Alcoa has set a goal, that will be implemented in 2020, to align its overall GHG (direct + indirect) emission intensity reduction target with the below 2°C decarbonisation path by reducing GHG emission intensity by 30 percent by 2025, and 50 percent by 2030, from a 2015 baseline. Note that this includes Alcoa's non-AWAC operations, including smelting. Separately, AWAC's refining operations have set a target to improve direct and indirect emissions intensity by 4 per cent by 2025, and 12 per cent by 2030, from a 2015 base.

To incentivise its managers and leaders, Alcoa connected 5 percent of its 2019 annual incentive compensation to carbon dioxide emission reductions through process improvements and energy efficiency. Due to a variety of plant instability issues across Alcoa's entire portfolio of assets, compensation linked to a reduction in emissions was not granted.

AWAC works to reduce the amount of energy it consumes through operational efficiency and technological advances. AWAC has implemented significant process improvements across its refining operations over the past few years, primarily on process controls, heat transfer efficiency and maintenance improvements.

All AWAC refineries, with the exception of Alumar in Brazil, operate predominantly on natural gas, which is a less emissions-intensive fossil fuel based energy source that can be used to transition to a lower carbon economy. Alumar runs on a mix of coal and fuel oil.

Future plans

AWAC continually seeks improvements and technological enhancements to reduce its energy consumption and GHG emissions.

AWAC is investigating emerging opportunities, such as innovative energy efficiency and renewable energy technologies.

For example, it is possible to shift to using renewable electricity or hydrogen in mining haulage vehicles, and the Western Australian government's Renewable Hydrogen Strategy aims for gas pipelines and networks to contain a blend of at least 10 per cent renewable hydrogen by 2040. AWAC will continue to monitor such developments.

Energy access and affordability

Why this matters

The energy-intensive nature of AWAC's operations demands secure, sustainable sources of energy. Guaranteeing access to low-cost, low-environmental-impact and long-term energy is a focal point of AWAC's energy strategy to ensure its commercial sustainability.

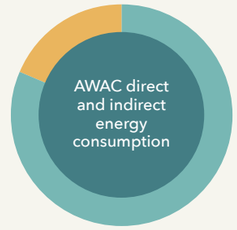
How this is managed

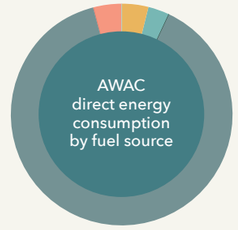
A major challenge facing AWAC is the need to guarantee energy supply while diversifying toward lower-emissions sources of energy. AWAC's opportunities to switch energy sources are restricted by:

- Long-term energy contracts at AWAC's Western Australia refineries
- The need for constant electricity supply at the Portland smelter.

AWAC has several measures in place to secure long-term access to energy:

- More than 90 percent of gas supply to the three refineries in Western Australia has been secured under long-term contracts until 2020
- In 2015, Alcoa of Australia secured a significant amount of its gas supplies until 2032
- In 2018, AWAC secured three new gas supply agreements that will supply approximately 25 percent of the Company's gas requirement in Western Australia (WA) from 2020 for a number of years.





Contents

Climate change

Why this matters

Climate change is a global challenge demanding a collective response to mitigate its environmental, social and economic impacts. AWAC takes seriously its obligation to respond to this challenge. Alcoa has a strong history of championing reductions in greenhouse gases in the aluminium industry and innovating to reduce its greenhouse gas emissions, and it continues to seek new avenues to mitigate its contribution to climate change.

How this is managed

In 2019, Alcoa conducted the first analysis of its operations following the recommendations from the Task Force on Climate-related Financial Disclosures. With the help of an external consultant, Alcoa assessed its climate-related transition and physical risks and opportunities to identify paths to improve our processes for addressing such risks and leveraging the opportunities. Key findings relevant to AWAC included:

- Policy risk exposure is higher in Australia given the concentration of operations there.
- Market risk exposure measures the changes in revenue mix and sources as a result of climate risk. Alcoa is significantly exposed to the construction and automotive markets, and both are expected to be impacted by high carbon prices.
- Reputational risk exposure is low because of the reductions in GHG emissions that Alcoa achieved in recent years, the public commitments Alcoa has made to continue reducing its emissions and alignment with the transition pathway.
- Technology risk exposure is the risk of substituting existing products and services with lower-emissions options. This has been assessed as a moderate risk because aluminium is considered part of the solution for the decarbonisation of society (e.g. aluminium enables lower emissions in transportation due to light weight) even if it is an energy-intense industry.
- Physical risk exposure relates to the risk of increased severity of extreme weather events like cyclones and floods, changes in precipitation patterns, and rising mean temperatures and sea levels. We were deemed to have a low level of physical risk exposure across our global portfolio. Some specific sites are exposed to water stress, wildfire and hurricane risk under different scenarios.

AWAC's climate strategy is focused on greenhouse gas mitigation, as outlined in the previous section.

See page 38 for Alumina's approach to climate risk.

Waste, tailings and residue management

Why this matters

The need to responsibly manage and maintain tailings facilities has been brought into the public conscience after a number of significant non-AWAC tailings failures resulted in loss of life and widespread environmental damage in recent years. As a result, extractives businesses are being encouraged to be more transparent around their ownership of tailings facilities and their management approach.

Alumina and aluminium processing create a variety of waste products, with the most significant by volume being bauxite residue from the refining process. In this process, 1.5 tonnes of bauxite residue is produced per tonne of alumina. Over the lifetime of an operation, this produces a significant volume of residue that requires environmentally safe disposal.

Bauxite residue consists of 'red' mud, sand and some residual caustic soda after the alumina content has been extracted. Other notable waste items are:

- mercury which is recovered through refining operations
- spent pot lining (SPL), a waste produced from aluminium smelting process comprising the waste carbon and refractory lining of smelting pots after it has reached the end of its serviceable life.

Alcoa has a strong history of championing reductions in greenhouse gases in the aluminium industry and innovating to reduce its greenhouse gas emissions, and it continues to seek new avenues to mitigate its contribution to climate change.

AWAC endeavours to appropriately manage its waste to reduce adverse environmental impacts and attempts to enhance the circularity of its waste wherever possible.

How this is managed

AWAC focuses on key elements of management and governance necessary to maintain the overall integrity of its residue storage areas and waste management processes including the implementation of:

- a governance structure that provides global oversight with clearly defined location responsibilities
- globally mandated standards covering planning, design, construction, operations, governance, monitoring and assurance;
- long term strategic master plans
- timely implementation of capital projects
- qualified personnel in key roles, such as civil engineering oversight at each location;
- review and assurance, such as peer reviews of storage area design and third party audits/inspections
- risk management, with facilities in place to manage extreme events
- emergency preparedness and response plans for unforeseen or extreme events.

Alumina refining is a hydrometallurgical process and as such contains a significant inventory of process liquor. Spills do occur, normally into bunded areas. In 2019 AWAC's operations recorded 324 spills outside of spill containment areas of >20 litres. In 2019 there were no major spills.

AWAC utilises technology to reduce its waste generation through innovative processing and alternative uses for waste products. AWAC recently commissioned residue filtration processes at the Kwinana alumina refinery in Western Australia, which uses very large filters to extract water from bauxite residue. Leveraging the innovation in residue filtration, AWAC's Pinjarra is commissioning a similar process, to be fully operational in 2020. The water obtained via the process is recycled back into the refinery process. Application of this technology has deferred the need to construct another 30-hectare residue storage area for at least 20 years, compared to every five years previously. This technology reduces freshwater use by approximately 2.2 gigalitres per annum across the two sites.

AWAC's approach to spent pot lining is first to minimise the volume generated by focusing on reduction at the source, which reduces the amount of required re-linings and replacements. AWAC recycle and/or reuse spent pot lining in accordance with applicate country-specific requirements.

Future plans

As a member of ICMM, Alcoa will look to apply the new ICMM Global Standard on Tailings Management released in August 2020.

Facilities closure

Why this matters

AWAC will invariably impact the environments at each of its operating sites. It is vital therefore, to remediate this impact throughout the life of AWAC operation, with particular emphasis on closure. AWAC's goal is to ensure the consequences of its operations have no significant lasting environmental impacts, and the land on which it operates is returned to its native state or promotes sustainable use of the land that has been mined. In some instances existing infrastructure is retained and transferred where is can benefit the local population. This is an essential commitment to the communities in which AWAC operates, building trust and credibility with its stakeholders and mitigating risks of environmental non-compliance and litigation associated with facilities closure.

How this is managed

Although rehabilitation is an activity conducted at the conclusion of a mine's life, AWAC plans for it as early as possible, and continually reviews and updates these closure plans throughout the life of the operation. While different approaches are adopted at different operations, AWAC strives to minimise the impact of its operations by limiting land disturbance and progressively rehabilitating areas that are no longer required for operations.

Contents

In areas of rich biodiversity, for example, topsoil is conserved and reused. Topsoil contains seeds, nutrients and microbes that are needed to successfully ensure diverse and sustainable vegetation can reintegrate after the closure. Strategies are also applied to optimise the number of plant species re-established in rehabilitated areas, including the spreading of treated seeds and planting nursery grown seedlings.

Bauxite mining, which is done in relatively shallow pits, accounts for the majority of land that is disturbed as a result of AWAC's operations. AWAC is committed to minimising the disturbance of the original habitat and works closely with community and regulatory stakeholders to restore those lands AWAC impacts to the most productive use possible. This includes, where feasible, returning sites to their pre-operating state.

In alumina refining the biggest closure risk is associated with closure and post closure management of residue storage facilities. In addition to managing the dam safety aspects of these facilities, Alcoa is continuously exploring ways to improve the closure performance and outcomes of these facilities.

Water stewardship

Why this matters

Water is a precious global commodity and a vital input into AWAC's operations. Water is used in:

- bauxite ore refining to produce alumina
- dust suppression, road watering and vehicle and equipment cleaning throughout mining operations
- ingot-casting process during smelting

To gain and maintain the support and trust of its local communities, governments and regulators around its environmental stewardship, AWAC must ensure it is using water efficiently. This is especially relevant in the context of increased global water scarcity as a result of:

- changing weather patterns
- growing population
- expanding urbanisation
- increasing agricultural and industrial sectors.

Conservative, environmentally conscious use of water also has a direct bearing on AWAC's commercial performance. Certain AWAC assets, particularly its alumina refineries, are large consumers of water. If not managed effectively, water scarcity has the potential to impact AWAC's costs, production volume and financial performance.

The region most impacted by water scarcity within AWAC's operations is Western Australia, which is prone to water stress and rainfall variability resulting in dryer climates.

How this is managed

Alcoa adopted the Minerals Council of Australia Water Accounting Framework in 2018. As part of the implementation, AWAC corrected several data interpretation errors used at the location level. In a few instances, surface water and ground water were not being correctly categorised. AWAC's intention is to continue to improve its data quality so that business decisions can be made using the best data possible. AWAC will progress to external verification in 2020.

In 2019, Alcoa also updated its water and wastewater management standard to align with ICMM's water stewardship framework and the Water Accounting Framework.

AWAC is committed to minimising the disturbance of the original habitat and works closely with community and regulatory stakeholders to restore those lands AWAC impacts to the most productive use possible. This includes, where feasible, returning sites to their pre-operating state.

AWAC operations in water-scarce locations recycle and reuse water until it is lost to evaporation or entrainment. Minimal discharge occurs at these sites.

AWAC encourages each of its locations to innovate in water management to reduce impacts on water stress and improve environmental outcomes. An example of such innovation can be seen at AWAC's Kwinana and Pinjarra refineries in Western Australia, which have adopted a state-of-the-art technology called residue filtration which enables the two sites to reduce their freshwater use by a collective 2.2 gigalitres (581 million gallons) annually.

Alcoa uses the World Resource Institutes Aqueduct tools to update AWAC location level water risk and refines its risk assessment qualitatively to consider items such as local regulatory requirements. Other standards and methodologies include:

- ISO 31000 Risk Management Standard
- IPCC Climate Change Projections.

Freshwater is the primary source of water used in AWAC's operations. Freshwater is obtained from a variety of sources depending on the location of the asset including:

- Groundwater
- Surface water (including from rivers, streams or lakes)
- Potable water from municipal supply

Some of the source water is subject to desalination. To the extent practicable AWAC recycles water within its processes to maximise the efficiency of water and associated resource use, e.g. energy from heated water and solution chemicals such as caustic soda.

Future plans

In 2019, Alcoa established a target to reduce the intensity of its total water use from Alcoa-defined water scarce locations by 5 percent by 2025 and 10 percent by 2035, from 2015 levels. This target was the result of a global water-risk survey conducted in 2018.

Land management and biodiversity

Why this matters

The conservation of local ecology and biodiversity is essential for ensuring native flora and fauna prosper during and after a mine's life. AWAC believes in the significance of biodiversity conservation and adopts the mitigation hierarchy of avoidance, minimisation, restoration and offsets during the life of its assets to limit its adverse impacts.

How this is managed

Biodiversity management is an essential practice for operations near regions of rich ecology and sensitive ecosystems (such as the Jarrah forest Darling Range of Western Australia and Juruti near the Amazon in Brazil).

To gauge AWAC's possible impacts on biodiversity, at the outset of a mine's operation AWAC conducts a thorough environmental assessment. Throughout the lifecycle of an asset's operations, AWAC will also conduct a range of monitoring activities to determine its anticipated rehabilitated state at closure. This includes:

- Assessing tree establishment and growth,
- Reviewing the concentration of undergrowth and diversity,
- Documenting the presence of birds, mammals, reptiles and insect life; and
- Monitoring ground and surface water levels and quality.

If areas of biodiversity are disturbed by AWAC's operations, AWAC seeks to progressively rehabilitate the land to mitigate any long-term impacts on the location. In 2019, Alcoa adopted a new corporate standard for biodiversity management, which requires each of AWAC's locations to conduct an assessment and identify material risks to biodiversity. A biodiversity action plan must then be developed and implemented to manage any identified risks. For new sites and major expansions of existing sites, the standard sets a target of achieving no net loss of biodiversity.

These plans have already been implemented in AWAC's Western Australian mining operations, the Juruti mine in Brazil and the Portland aluminium smelter in Victoria.

Contents

Certain AWAC operations are within or adjacent to protected areas or sensitive biodiverse areas.

Operational site	Site location and size	Position	Biodiversity value
Huntly and Willowdale bauxite mines (active)	**Jarrah Forest Western Australia** 712,900 hectares (1,761,614 acres)	Within protected area	Recognised by Conservation International as an international biodiversity hotspot; threatened species and ecological communities (International Union for Conservation of Nature – IUCN – and federal government listed)
Anglesea power station (coal mine and power station closed in August 2015)	**Anglesea Victoria Australia** 787 hectares (1,945 acres)	Within and adjacent to protected area	Adjacent land zoned for conservation and listed on the National Estate Register; threatened species and ecological communities (IUCN and federal government listed)
Wagerup alumina refinery	**Wagerup Western Australia** 6,000 hectares (14,826 acres)	Contains portions of area of biodiversity value	Ramsar listed wetlands adjacent; threatened species and ecological communities (International Union for Conservation of Nature (IUCN) and federal government listed)
Portland aluminium smelter	**Portland Victoria Australia** 500 hectares (1,236 acres)	Adjacent to protected area	Threatened species and ecological communities (International Union for Conservation of Nature (IUCN) and federal government listed)
Juruti bauxite mine (active)	**Juruti, Brazil** 29,426 hectares (72,713 acres) that will be mined	Within protected area	Amazon rainforest and river; threatened species and ecological communities (IUCN listed)
Coermotibo bauxite mine (bauxite mine that ceased operation in October 2015)	**Marowijne District Surinam**e 32,800 hectares (81,051 acres)	Adjacent to protected area	Adjacent to IUCN protected area; threatened species (IUCN listed)
Point Comfort alumina refinery (alumina refinery that was curtailed in 2016)	**Point Comfort Texas USA** 1,417 hectares (3,501 acres)	Adjacent to protected area	Native grassland and intertidal emergent marsh (protected under the Clean Water Act); threatened species (IUCN and federal government listed)

Alcoa has a rehabilitation team that is responsible for the rehabilitation of any affected sites. Its efforts are reviewed by environmental groups in relevant geographies.

AWAC has committed not to explore, mine or operate in World Heritage sites, and respects legally designated protected areas such as national parks and nature reserves.

There were no non-compliances with environmental laws and regulations for AWAC in 2019.

Air quality

Why this matters

The refining of alumina from bauxite ore and smelting of aluminium from alumina produce a range of airborne emissions. AWAC understands the importance of effectively managing these emissions to reduce any adverse effects on its employees, local communities and the broader public.

How this is managed

Different types of air emissions are created depending on the manufacturing process at AWAC's locations. AWAC's smelting operation create a majority of the business' sulphur dioxide and fluoride emissions, while its refineries account for most of its emissions of mercury.

AWAC utilises an industry-leading approach to controlling its mercury emissions in the alumina refining process. Two primary mercury emission-reduction technologies have been developed by Alcoa in collaboration with leading academics and experts in the field.

1. The first technology condenses elemental mercury from gas streams, allowing controlled separation and safe disposal.
2. The second technology, which has been patented by Alcoa, uses a chemical additive to stabilise mercury through sections of the process where it could otherwise be emitted.

The main air quality issue associate with bauxite mining is dust. AWAC has introduced the following mechanisms to manage dust emissions from its mining operations:

- Watering haul roads and bauxite residue areas, using binders on storage piles and incorporating vegetative covers where possible to minimise windblown dust
- Using weather forecasts to help guide decisions regarding the use of additional controls during periods of unfavourable weather conditions
- Implementing capture and control systems for loading / unloading, material handling, smelting and other process operations.

AWAC frequently employ visual-emission observation and ambient-air monitoring as tools to verify the effectiveness of these controls.

Two primary mercury emission-reduction technologies have been developed by Alcoa in collaboration with leading academics and experts in the field.

Contents

People

AWAC's diverse and experienced people deliver on its values and drive its innovation and performance. AWAC has a responsibility to support this workforce by providing a safe, inclusive and empowering workplace. AWAC achieves this through stringent health and safety policies and initiatives, promoting diversity and inclusion, and offering its team the opportunity to expand their skills through training and experience.

Occupational health, safety and wellbeing

Why this matters

The nature of AWAC's operations create an inherent level of risk for its people. AWAC is committed to limiting these risks and ensuring its people come to work and leave at the end of the day confident that their safety and wellbeing has been prioritised and preserved. This extends beyond physical health risks and includes wellbeing, mental health and flexibility in work arrangements to enable AWAC's people to flourish. This also contribute to AWAC's bottom line; a safe, healthy and supported workplace is an investment that produces a motivated, productive and committed workforce.

How this is managed

Safety

To identify local safety hazards, AWAC conducts periodic risk-based safety audits at the location level with the objective of observing people and processes, where the work is performed, to accurately assess any risks. An audit team consisting of internal Environment Health and Safety experts, operational subject matter experts and external consultants collaborates with location personnel to identify any critical risks.

Alcoa's ISO-certified corporate EHS management system also provides a universally recognised management framework for AWAC's EHS risk evaluation, planning, objective setting and operational control activities at all locations covering both employees and contractors.

All employees, particularly those at an operating location, are required to take annual safety and health training that is determined by their specific roles, tasks, areas where they work, job functions and responsibilities. The location's EHS and human resources personnel determine what training is required for each employee, with more than 100 classroom and online training modules available on procedures, policies and operational processes.

To ensure senior accountability around safety matters, Alcoa's Executive Team and other senior leaders review corrective actions and effectiveness of controls for all AWAC sites and sponsor company-wide hazard-mitigation initiatives.

Health

Alcoa's health vision is to prevent future occupational disease through exposure controls; support personal health and wellbeing through workplaces and culture; and operate in a manner that does not negatively impact the health of its communities.

A four-pillar health framework, with overlapping and synergistic elements, guides Alcoa's strategies and tactics toward achieving this vision:

- Health hazard controls to prevent occupational disease
- Health status and fitness for work to ensure an employee's health status is compatible with assigned work
- Community and public health, which facilitates its social licence to operate
- Personal health and wellbeing

Further guiding AWAC's efforts are internal global health standards that often are more stringent than those specified by applicable law.

Performance over 2019

In 2019, AWAC improved the quality of its audit process by deploying a new training program on professional auditing. Alcoa's goal is to have every employee complete the training before participating in an audit.

Also, after an extensive update of Alcoa's safety standards in 2018, in 2019 each AWAC location conducted a gap analysis against the new standards and developed a three-year action plan to close identified gaps. Actions are being prioritised based on operational risk profiles.

In 2019, AWAC had its second consecutive year with no employee or contractor workplace fatalities.

Mental health will be a focus area in 2020. Among AWAC's planned activities is participation in World Mental Health Day, which is sponsored each October by the World Health Organization.

For further information around AWAC's health and safety performance for 2019, please refer to page 62.

Total Recordable Incident Rate, employees and supervised contractors (full facility)

	Global	Australia	Europe	North America	South America
2015	–[1]	1.0	0.36	4.72	0.09
2016	1.49	1.60	0.91	4.49	0.57
2017	1.299	2.082	0.703	4.169	0.465
2018	1.343*	2.485	0.956	3.844	0.504
2019	1.358	2.408	1.445	1.014	0.543

Total recordable incident rate represents the number of injuries and illnesses resulting in days away from work, job transfer or restriction, medical treatment or other recordables per 100 full-time workers.

[1] Data was not available.

* Previously reported, in the 2018 Sustainability Report, as 1.261 due to a calculation error.

Fatalities by gender

	Male	Female
2015	1^	0
2016	0	0
2017	2^	0
2018	0	0
2019	0	0

^ Contractor

Contents

Diversity and inclusion

Why this matters

A diverse workforce encourages diversity in thinking, approaches to challenges, and the skillsets a team has to offer. AWAC wants to capture and encourage new ways of thinking and teaming, so that it can constantly improve how it works and the quality of its outputs. Ensuring AWAC employees feel supported and encouraged to be themselves at work, and feel that they have opportunities to be heard and acknowledged for their efforts is also crucial to fostering an engaged and effective workforce.

How this is managed

AWAC's aim in actively promoting diversity and inclusion is to ensure that all employees have access to the same opportunities and treatment in their roles, and feel valued and accepted every day. AWAC acknowledges there is an imbalance in gender representation in its industry, and so its focus is to move away from aspirations to intentional actions that are impactful in advancing diversity, inclusion and equity. AWAC's methods for closing the gender gap will be tracked based on diversity percentage and include:

- Diversifying the applicant pool
- Diversifying hiring and promotions
- Improving employee experience to retain employees.

Alcoa has also directly linked annual compensation to its leader's diversity performance, in order to encourage accountability and action from its leaders on this important issue.

During 2019 Alcoa set a company-wide target to achieve a 0.8 percentage point increase in female representation in the workforce. With a 0.4 percentage point increase in female representation during the calendar year, this target was not achieved.

While AWAC is instigating change and targets at a high level, it is also encouraged by the individual initiatives conducted at its sites during 2019. An example of some of these practices include:

- Willowdale mine (Western Australia) faced challenges improving diversity in the workforce due to limited hiring opportunities. This was overcome by encouraging job sharing, which provided new opportunities for those who prefer part-time working arrangements
- Brazil operations developed an Executive Committee on Diversity, which brought governance and diversity initiatives to all sites in 2019. The sites conducted 11 workshops and panels involving approximately 700 employees, presented four videos on gender and LGBT+ inclusion, and distributed 15 internal and external communications that included emails and social media posts.

In addition, AWAC conducted its first global pay equity analysis through a third-party. Key findings include a 2 percent gender pay gap within specific pay band categories, and an overall gender pay gap of 18 percent due to lower representation of females in the top pay bands.

Future plans

AWAC acknowledges the work it still needs to put in to achieve the diverse representation in its workforce that it believes is both fair for its people and positive for its operations. In 2020 Alcoa plan to launch a revised biennial employee survey for all AWAC operations to ensure it is listening frequently to the voices of its employees in a more structured manner, and to identify the most important elements that contribute to their experience.

Labour relations

Why this matters

Employees that feel supported in their role and listened to by their organisation through transparent discourse will be more engaged and invested in the work they do. AWAC aims to make its employees feel safe and supported through open and honest consultative practices with individuals as well as their representatives such as workers unions. Listening to employees is critical to AWAC because it wants to understand the issues that they face, and achieve constructive outcomes to maintain a motivated and committed workforce.

How this is managed

AWAC management maintain open and ongoing communications with all active workers unions and collective bargaining agreements that encapsulate its workforce. It engages in formal negotiations and addresses all informal issues that are brought to its attention by these groups to ensure its workforce is represented and their concerns are addressed.

Alcoa has a dedicated Human Resources team that manages all its employees, and a code of conduct that ensures it conducts business and treats its employees consistently in line with its values and applicable laws worldwide.

Performance over 2019

In 2019 AWAC continued to negotiate a new, modern Australian Enterprise Bargaining Agreement (EBA) in response to the expiration of the 2014 Australian Workers' Union EBA. The aim was to enable more efficient and productive operation of AWAC's Western Australian mines and refineries and to improve AWAC's ability to respond to market conditions. In November 2019, employees voted in support of the new proposed EBA, and it came into effect December 23, 2019 covering approximately 1,400 employees across the Bauxite and Alumina segments combined.

Employee development and engagement

Why this matters

To recruit and maintain an engaged and motivated workforce, a sense of opportunity and genuine progress for employees is vital. For AWAC, this translates to a focused effort to ensure all its employees experience a supportive and dynamic pathway for their professional development. Not only does this create a strong, agile and energised workforce; it also establishes a sense of loyalty within the business, strengthening AWAC's culture of integrity and commitment.

How this is managed

In 2019, to enhance its approach to recruitment, Alcoa added a talent sourcing specialist to identify and target candidate pools that have high levels of Alcoa prospects.

AWAC also focused on how it engages, assesses and grows its people through Alcoa's People Development Program. The intent of the program is to develop people by giving them tools to engage in rounded feedback sharing and check-ins with their manager for ongoing development.

Globally and locally, AWAC conducted webinars and sent communications to equip employees and managers to share feedback with others in a constructive way. AWAC also more strongly linked career check-ins into its integrated talent cycle to ensure employee career aspirations are thoughtfully considered when making talent decisions related to succession planning, moves, and more.

AWAC provides compensation that is competitive within the relevant labour market. AWAC recognises an employee's full contribution through its total rewards approach, seeking to align a value proposition that results in satisfied, engaged and productive employees who contribute to the overall success of the company and drive results.

Listening to employees is critical to AWAC because it wants to understand the issues that they face, and achieve constructive outcomes to maintain a motivated and committed workforce.

Data tables

Environment

Energy efficiency and greenhouse gas emissions

Energy efficiency of AWAC assets

Gigajoule (GJ) of energy required per tonne of production

AWAC assets	2018	2019	% change
Mining (bauxite)	0.07*	0.08	6.27
Refining (alumina)	9.07	9.03	-0.38
Smelting (aluminium)	53.91	54.05	0.27

* Previously reported, in the 2018 Sustainability Report, as 6.5 due to a calculation error.

Direct energy consumption by source (mines, refineries and smelter) (full facility)

Gigajoules (GJ)

Direct energy source	Purchased or produced	2015	2016	2017	2018	2019
Natural gas	Purchased	113,987,709[1]	98,858,338[2]	96,937,976	92,694,748[3]	96,230,317
Diesel	Purchased	2,548,161	2,563,766	2,728,504	2,852,216	3,241,314[4]
Petrol/gasoline	Purchased	65,862	52,422	54,094	62,675	15,800
Propane	Purchased	11,049	9,676	7,380	5,766	6,124
Coal	Purchased/ Produced	11,232,338	12,717,307	12,222,105	11,499,896	10,984,564
Residual fuel oil	Purchased	17,297,114[5]	9,908,159	9,808,686	9,326,396	10,762,354
Biodiesel	Purchased	29,802	30,058	58,444	76,986	88,725

1 Natural gas consumption grew with the transition of the San Ciprian refinery from fuel oil to gas.
2 Natural gas usage reduced due to the curtailment of the Point Comfort refinery.
3 Drop in consumption due to 3 percent lower production during 2018.
4 Increase in diesel consumption during 2019 partly due to increased production at mining operations.
5 Residual fuel oil dropped following the sale of the Jamalco refinery, transition of the San Ciprian refinery from oil to natural gas and some curtailment of production at the Suralco refinery.

Indirect energy consumption by source (mines, refineries and smelters) (full facility)

Gigajoules (GJ)

		2015	2016	2017	2018	2019
Electricity	(Non-renewable)	18,074,437*	16,580,489	11,309,382*	15,784,794*	14,135,991
Electricity	(Renewable)	3,149,793*	1,359,424	2,971,338*	3,072,838*	4,947,813
Total electricity		21,224,230[1,*]	17,939,913[1]	14,280,720[2]	18,857,832[2,*]	19,083,804
Steam		13,254,993*	13,499,481	13,067,325	13,913,323	13,141,137

1 Total electricity dropped in 2016 due to the curtailment of Point Comfort and Suralco.

2 The increase in electricity usage between 2018 and 2017 is due largely to the increase in electricity used at the Portland smelter resulting from production increase following the restoration of a potline that was lost for most of 2017 due to the December 2016 power outage.

* Previously reported, in the 2018 Sustainability Report, as:

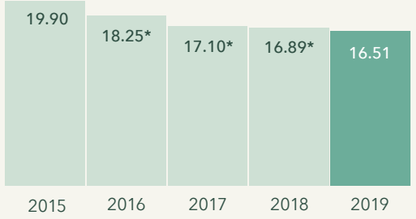
2015 – non-renewable 18,374,903, renewable 3,149,789, 2017 – non-renewable 12,151,429, renewable 2,129,291 and 2018 – non-renewable 16,665,325, renewable 2,191,507 due to mistakenly excluding hyrdo electricity from the renewable electricity split which resulted in the understatement of renewable electricity and overstatement of non-renewable electricity,

2015 – total electricity 21,524,692 and steam 12,954,290 due to calculation error;

2018 – total electricity 18,856,832 due to a transcription error.

Combined smelter and refinery GHG intensity

Tonnes of GHG per tonne of production



* Previously reported, in the 2018 Sustainability Report, as: 17.22 for 2018, 17.06 for 2017 and 19.41 for 2016 due to data changes from AWAC's adoption of the latest global warming potentials from the fifth assessment report (AR).

Greenhouse Gas Emissions (full facility)

Tonnes CO_2-e

GHG	2015	2016	2017	2018	2019
Direct (Scope 1)	8,986,055	7,788,387	7,575,617	7,406,939*	7,706,949
Indirect (Scope 2)	6,180,774	5,588,770	3,741,416	5,071,704*	4,833,854
Total (Scope 1 & 2)	15,166,829	13,377,157	11,317,033	12,478,643*	12,540,803
(Scope 3)	–	–	34,468,831	35,103,007	37,289,281

Emissions Calculation Methodology: The Greenhouse Gas Protocol: A Corporate Accounting and Reporting Standard (Revised Edition), Australia – National Greenhouse and Energy Reporting Act, Brazil GHG Protocol Programme and The Climate Registry: General Reporting Protocol. Emission per source calculated by applying WRI Calculation Tool.

Scope 1 (direct GHG) emissions are those released directly by AWAC's sites through direct use of energy sources on-site such as natural gas. Scope 2 or indirect emissions are those from electricity generated by external energy suppliers that supply energy to AWAC's sites and also associated with the generation of steam at the co-generation facilities located at the Pinjarra refinery.

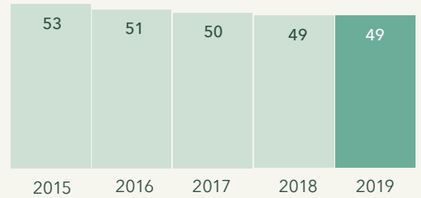
Scope 3 emissions have also been calculated for the third year and included as contributor to the value of Scope 3 emissions is processing of sold goods. AWAC's main product is alumina, which is used downstream by customers in the production of aluminium, which is an energy intensive activity.

* Previously reported, in the 2018 Sustainability Report, as: 7,413,321; 5,087,177; 12,500,498 due to data changes from AWAC's adoption of the latest global warming potentials from the fifth assessment report (AR).

Waste, tailings and residue management

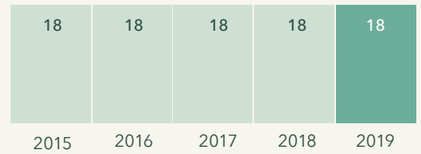
Bauxite residue storage efficiency[1]

Square metres of land required per thousand tonnes of alumina produced



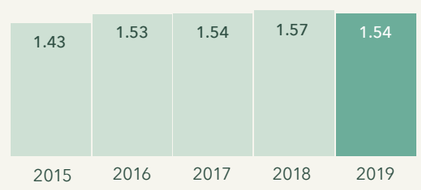
Bauxite residue storage area rehabilitation[1]

Percent of total area rehabilitated



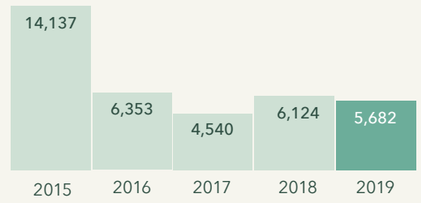
Bauxite residue intensity[1]

Tonnes per tonnes of alumina produced



Land filled waste (full facility)

Tonnes (t)



AWAC's landfilled waste data excludes certain streams, such as bauxite residue, refining process waste and fly ash. These forms of waste are managed with onsite storage or impoundment areas and are not sent to landfills. Overburden and rock generated from AWAC mining activities, which are also omitted, are not considered waste because the materials are used for mine rehabilitation.

1 This data is calculated on an Alcoa basis, however relates predominantly to AWAC assets as over 95% of bauxite and alumina assets in the Alcoa portfolio are owned by AWAC.

Facilities closure

Mining land disturbed/land rehabilitated

Hectares

	2015	2016	2017	2018	2019
Open mine area	13,702	14,155	14,380*	14,766*	15,069
Area disturbed (Annual)	1,086	977	1,123*	1,195*	1,359
Area rehabilitated (Annual)	1,114*	532*	898*	810*	1,057

The values in this table include some of Alcoa's South American operations that do not form part of AWAC operations. However, the vast majority of disturbance and subsequent rehabilitation is the result of AWAC's mining and infrastructure activities.

* Previously reported, in the 2018 Sustainability Report, having mistakenly included North American sites and were therefore were overstated.

Area rehabilitated

Hectares

Region	2015	2016	2017	2018	2019
Australia	550	290	412	550	665
South America	564	242	486	260	392

Annual figures. Area rehabilitated means land returned to natural conditions or to productive use (such as farming) after mining or decommissioning of mine infrastructure in each reported year. The increase in area rehabilitated in 2019 was mainly due to an increase in area rehabilitated at the Huntly mine in Australia and an increase in areas returned to the government of Suriname compared to 2018.

Land management and biodiversity

Area disturbed for mining and associated infrastructure (full facility)

Hectares

Region	2015	2016	2017	2018	2019
Australia	756	631	675	675	954
South America	330	346	448	520	406

'Area disturbed' means land used in each reported year for mining or for mining infrastructure (eg. roads, shops, crushing equipment, conveyors). In Australia, the increase in 2019 was mostly due to clearing for long-term infrastructure associated with the next mining region at the Willowdale mine.

Water stewardship

Freshwater intensity (refining and smelting combined)

Cubic metres/tonne of production

	2015	2016	2017	2018	2019
Refining	1.66	1.83	1.62	1.45	1.70
Smelting	1.17	1.05	1.26	1.08	1.00
Total intensity	4.32	4.52	4.34	3.84	4.22

Freshwater withdrawal by source (full facility)

Millions of cubic metres

Source	2015	2016	2017	2018	2019
Total	34.4	31.4	28.3	28.3	31.0

Air quality

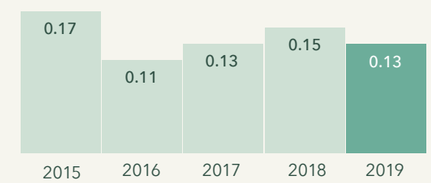
Emissions

Tonnes

	2018	2019
SO^2 emissions	9,824	9,575
NOX emissions	10,184	10,593
HG emissions	1,956	1,695

Mercury emissions intensity

Grams per tonne



* Previously reported, in the 2018 Sustainability Report, as: 2016 as 0.15; 2017 as 0.12 due to AWAC's data changes arising from actual data replacing estimated data. Estimated data has been used at some locations for 2019.

People

All figures under "people" are calculated on a full facility basis and include employees and supervised contractors.

Occupational health, safety and wellbeing

Lost workday rate[1]

	Global	Australia	Europe	North America	South America
2015	0.16	0.20	0	0.23	0.09
2016	0.31	0.41	0	0	0.14
2017	0.315	0.458	0.141	1.042	0.169
2018	0.203	0.403	0.137	0	0.065
2019	0.283	0.457	0.161	0	0.163

[1] Lost workday rate represents the number of injuries and illnesses resulting in one or more days away from work per 100 full-time workers.

Lost workday incidents by gender

	Male	Female	Total
2015	11	0	11
2016	20	0	20
2017	32	2	34
2018	28	1	29
2019	37	2	39

Days away, restricted and transfer rate[1]

	Global	Australia	Europe	North America	South America
2015	0.04	0.42	0.12	0.92	0.09
2016	0.16	0.23	0	0	0
2017	0.575	0.859	0.562	3.127	0.211
2018	0.567	0.980	0.683	1.922	0.232
2019	0.733	1.213	0.803	0	0.367

[1] Days away, restricted and transfer rate includes lost workday cases plus cases that involve days of restricted duty and job transfer per 100 full-time workers.

Days away, restricted and transfer incidents by gender

	Male	Female	Total
2015	23	0	23
2016	9	1	10
2017	59	3	62
2018	73	8	81
2019	95	6	101

Total recordable incidents by gender

	Male	Female	Total
2015	81	2	83
2016	84	6	90
2017	132	8	140
2018	175	17	192
2019	174	13	187

GRI Index

This index shows where GRI Standards are addressed for Alumina and AWAC. Note that more in-depth information on management approach for some AWAC topics may be found in the Alcoa Sustainability Report.

Indicator	Description	Alumina location	AWAC location
General disclosures			
Organizational profile			
102-1	Name of the organization	P6–7	P6–7
102-2	Activities, brands, products and services	P7–8	P7–8
102-3	Location of headquarters	P7	P8
102-4	Location of operations	P7	P9, 10–11
102-5	Ownership and legal form	P7	P8–9
102-6	Markets served	N/A	P11
102-7	Scale of the organization	P9, 27–28	P10
102-8	Supply chain	N/A	P46–47
102-10	Significant changes to the organization and its supply chain	None	None
102-12	External initiatives	P21–22	P21–22
102-13	Membership of associations	P34	P46
Strategy			
102-14	Statement from senior decision-maker	P4–5	N/A
102-15	Key impacts, risks, and opportunities	P20–21	P20–21
Ethics and integrity			
102-16	Values, principles, standards, and norms of behaviour	P32	P44
102-17	Mechanisms for advice and concerns about ethics	P32–33	P44
Governance			
102-18	Governance structure	P36–38	P39–42
102-19	Delegating authority	P30	P39–42
102-20	Executive-level responsibility for economic, environmental, and social topics	P30	P39–42
102-21	Consulting stakeholders on economic, environmental, and social topics	P20–21, 51	P20–21, 51
102-22	Composition of the highest governance body and its committees	P29–31	P39–42
102-23	Chair of the highest governance body	P31	P41
102-24	Nominating and selecting the highest governance body	P30–31	P39–42
102-25	Conflicts of interest	P33	N/A
102-26	Role of highest governance body in setting purpose, values, and strategy	P31	P39–42
102-27	Collective knowledge of highest governance body	P31	P39–42
102-28	Evaluating the highest governance body's performance	P31	P39–42
102-29	Identifying and managing economic, environmental, and social impacts	P19–21	P39–42
102-30	Effectiveness of risk management processes	P39–42	P39–42
102-32	Highest governance body's role in sustainability reporting	P3	P3
102-33	Communicating critical concerns	P19–21	P45
102-34	Nature and total number of critical concerns	P19–21	P19–21
102-35	Remuneration policies	P35	P45
102-36	Process for determining remuneration	P35	P48

Indicator	Description	Alumina location	AWAC location
Stakeholder engagement			
102-40	List of stakeholder groups	P19–21	P19–21, 45, 51
102-41	Collective bargaining agreements	P28	P65
102-42	Identifying and selecting stakeholders	P19–21	P19–21
102-43	Approach to stakeholder engagement	P19–21	P19–21
102-44	Key topics and concerns raised	P19–21	P19–21, 51
Reporting practice			
102-45	Entities included in the consolidated financial statements	P9	N/A
102-46	Defining report content and topic boundaries	P3,19–21	P3,19–21
102-47	List of material topics	P19–21	P19–21
102-48	Restatements of information	None	P66
102-49	Changes in reporting	P19–21	N/A
102-50	Reporting period	P2	N/A
102-51	Date of most recent report	P2	N/A
102-52	Reporting cycle	P2	N/A
102-53	Contact point for questions regarding the report	P3	P3
102-54	Claims of reporting in accordance with the GRI Standards	P3	P3
102-55	GRI content index	P74	P74
102-56	External assurance	N/A	P3, Alcoa Sustainability Report P104

GRI standards topic specific disclosures

Management approach			
103-1	Explanation of the material topic and its Boundaries	P19–21	P19–21
103-2	The management approach and its components	P26–42	P44–65
103-3	Evaluation of the management approach	P26–42	P44–65
Economic			
201-1	Direct economic value generated and distributed	P14–15	P16–17
201-2	Financial implications and other risks and opportunities due to climate change	P36–38	P16
Anti-corruption			
205-2	Communication and training about anti-corruption policies and procedures	P33	P44
Energy			
302-1	Energy consumption within the organisation	N/A	P54, 67
302-3	Energy intensity	N/A	P68
302-4	Reduction of energy consumption	N/A	P68
Water and effluents			
303-3	Water withdrawal	N/A	P71
303-4	Water discharge	N/A	P71
303-5	Water consumption	N/A	P71
Biodiversity			
304-1	Operational sites owned, leased, managed in, or adjacent to, protected areas and areas of high biodiversity value outside protected areas	N/A	P59–60
304-2	Significant impacts of activities, products, and services on biodiversity	N/A	P60
304-3	Habitats protected or restored	N/A	P59–60
304-4	IUCN Red List species and national conservation list species with habitats in areas affected by operations	N/A	P60
Emissions			
305-1	Direct (Scope 1) GHG emissions	N/A	P68
305-2	Energy indirect (Scope 2) GHG emissions	N/A	P68
305-3	Other indirect (Scope 3) GHG emissions	N/A	P68
305-4	GHG emissions intensity	N/A	P68
305-5	Reduction of GHG emissions	N/A	P68
305-7	NOx SOx and other significant air emissions	N/A	P70
Waste			
306-1	Waste generation and significant waste-related impacts	N/A	P56, 69–70
306-2	Management of significant waste related impacts	N/A	P56
306-3	Waste generated	N/A	P56, 69–70
306-5	Waste directed to disposal	N/A	P69
Environmental compliance			
307-1	Non-compliance with environmental laws and regulations	N/A	P45, 59
Occupational health and safety			
403-1	Occupational health and safety management system	N/A	P62
403-2	Hazard identification, risk assessment, and incident investigation	N/A	P63
403-3	Occupational health services	N/A	P63
403-5	Worker training on occupational health and safety	N/A	P63
403-6	Promotion of worker health	N/A	P63
403-9	Work-related injuries	P28	P63
403-10	Work-related ill health	N/A	P63
Human rights assessment			
412-1	Operations that have been subject to human rights reviews or impact assessments	N/A	P48
Local communities			
413-1	Operations with local community engagement, impact assessments, and development programs	N/A	P50
413-2	Operations with significant actual and potential negative impacts on local communities	N/A	P50
Public policy			
415-1	Political contributions	P34	P45

SASB indicators

The following table outlines the SASB Metals and Mining requirements, including material topics and metrics for disclosure, along with whether, how and where we have met requirements throughout this report. Where we have not met requirements, this is largely because they are not relevant in an Australian context.

Material topics and accounting metrics	Unit of measure	Code	Response	Reference
Activity metrics				
Production of (1) metal ores and (2) finished metal products	Tonnes (t) saleable	EM-MM-000.A	Bauxite: 44.6 million t on wet basis Alumina: 12.6 million t Aluminium: 161 thousand t	P17
Total number of employees Percentage contractors	Number Percentage (%)	EM-MM-000.B	5,106 Not available	P10
Greenhouse gas emissions			Energy efficiency and greenhouse emissions	P54
Gross global Scope 1 emissions, percentage covered under emissions-limiting regulations	Tonnes (t) CO_2e Percentage (%)	EM-MM-110a.1	Scope 1: 7,706,949 t CO_2-e	P68
Discussion of long-term and short-term strategy or plan to manage Scope 1 emissions, emissions reduction targets, and an analysis of performance against those targets	N/A	EM-MM-110a.2	See 'AWAC: Environment – Energy efficiency and greenhouse emissions'	P54
Air quality			Air quality	P61
Air emissions of the following pollutants: 1. CO 2. NOx (excluding N2O) 3. SOx 4. Particulate matter (PM10) 5. Mercury (Hg) 6. Lead (Pb) 7. Volatile organic compounds (VOCs)	Tonnes (t)	EM-MM-120a.1	 1. Not available 2. 11,262t 3. 12,263t 4. Not available 5. 1,863t 6. Not available 7. Not available	P71
Energy management			Energy efficiency and greenhouse emissions	P54
1. Total energy consumed 2. Percentage grid electricity 3. Percentage renewable	Gigajoules (GJ) Percentage (%) Percentage (%)	EM-MM-130a.1	1. Direct energy: 121,329,198 GJ Indirect energy: 32,224,941 GJ 2. Electricity: 21% 3. Renewable: 3%	P67
Water management			Water stewardship	P58
1. Total fresh water withdrawn (percentage of each in regions with High or Extremely High Baseline Water Stress) 2. Total fresh water consumed (percentage of each in regions with High or Extremely High Baseline Water Stress)	Thousand cubic meters (m^3) Percentage (%)	EM-MM-140a.1	1. 30,976,531m^3 (55.13% from Alcoa-defined water stressed areas) 2. Not available	P71
Number of incidents of non-compliance associated with water quality permits, standards, and regulations	Number	EM-MM-140a.2	None	N/A
Waste and hazardous materials management			Waste, tailings and residue management	P56
Total weight of tailings waste, percentage recycled	Tonnes (t), Percentage (%)	EM-MM-150a.1	Not available	N/A
Total weight of mineral processing waste, percentage recycled	Tonnes (t), Percentage (%)	EM-MM-150a.2	Not available	N/A
Number of tailings impoundments, broken down by MSHA hazard potential	Number	EM-MM-150a.3	88; MSHA not applicable	N/A
Biodiversity impacts			Land management and biodiversity	P59
Description of environmental management policies and practices for active sites	N/A	EM-MM-160a.1	Land management and biodiversity	P59
Percentage of mine sites where acid rock drainage is: (1) predicted to occur, (2) actively mitigated, and (3) under treatment or remediation	Percentage (%)	EM-MM-160a.2	Not available	N/A
Percentage of (1) proved and (2) probable reserves in or near sites with protected conservation status or endangered species habitat	Percentage (%)	EM-MM-160a.3	Not available. For qualitative discussion see 'AWAC: Environment: Land management and biodiversity'	P59

Material topics and accounting metrics	Unit of measure	Code	Response	Reference
Security, human rights, and rights of Indigenous peoples			Indigenous peoples	P53
Percentage of (1) proved and (2) probable reserves in or near areas of conflict	Percentage (%)	EM-MM-210a.1	0% On a full facility basis, none of AWAC's proved or probable reserves are in or near areas of conflict.	N/A
Percentage of (1) proved and (2) probable reserves in or near indigenous land	Percentage (%)	EM-MM-210a.2	100% LandMark's map of indigenous lands acknowledged by governments indicates that all three of AWAC's proved and probable reserves are near indigenous lands. They are: Juruti, Huntly and Willowdale.	N/A
Discussion of engagement processes and due diligence practices with respect to human rights, indigenous rights, and operation in areas of conflict	N/A	EM-MM-210a.3	See 'Local commitment with communities' For detail on Alcoa's engagement with indigenous rights, see its Indigenous Peoples Statement.	P50
Community relations			Indigenous peoples	P53
Discussion of process to manage risks and opportunities associated with community rights and interests	N/A	EM-MM-210b.1	See 'Local commitment with communities'	P50
Number and duration of non-technical delays	Number Days	EM-MM-210b.2	Not available	N/A
Labour relations			The Alumina team Labour relations	P27 P56
Percentage of active workforce covered under collective bargaining agreements, broken down by U.S. and foreign employees	Percentage (%)	EM-MM-310a.1	Not available For qualitative discussion, see 'AWAC: People – Labour relations	P65
Number and duration of strikes and lockouts	Number Days	EM-MM-310a.2	There were EBA negotiations and protests in Western Australia; however, no data is available for exact number of days.	N/A
Workforce health and safety			Health	P63
1. MSHA all-incidence rate 2. Fatality rate 3. Near miss frequency rate (NMFR) and 4. Average hours of health, safety, and emergency response training for (a) full-time employees and (b) contract employees	Rate	EM-MM-320a.1	1. 1.36 2. 0 3. 0.77 4. Not available. For qualitative discussion see 'AWAC: People – safety'	P72
Business ethics and transparency			Reporting and investigating integrity issues, concerns and non-compliances	P45
Description of the management system for prevention of corruption and bribery throughout the value chain	N/A	EM-MM-510a.1	The Alcoa Ethics and Compliance team deliver in-person training on its Code of Conduct, policies and procedures, anti-corruption principles and its expectations of supervisors. Other governance policies that drive ethical and responsible business practice at AWAC include: - Alcoa's Corporate Governance Guidelines - Anti-Corruption Policy - Human Rights Policy - International Trade Compliance Policy.	P45
Production in countries that have the 20 lowest rankings in Transparency International's Corruption Perception Index	Tonnes (t) saleable	EM-MM-510a.2	AWAC does not produce in any of the 20 lowest ranking countries in Transparency International's Corruption Perception Index	N/A

ALUMINA
LIMITED