



AUSTRALIAN
ALUMINIUM
COUNCIL LTD

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Department of Industry, Science, Energy and Resources (DISER)
Via <https://consult.industry.gov.au/industry-capability/scri/>

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Australian Aluminium Council Response to Supply Chain Resilience Initiative

What critical products does your firm produce? Where possible please list the product itself (e.g. Surgical masks) or, if needed, list the category of product (e.g. Personal Protective Equipment)

The Australian Aluminium Council is the industry association representing:

- Bauxite mining;
- Alumina refining;
- Aluminium smelting and
- Extruded aluminium manufacture and distribution.

Critical market segments include defence, heavy transport, ship building, medical equipment, building and construction (residential, commercial and industrial), medical, energy and infrastructure projects.

What issues did your business experience accessing products or inputs to manufacture critical products during 2020?

The Australian aluminium industry is largely vertically integrated. The industry includes five bauxite mines (>10 Mt per annum), six alumina refineries and four aluminium smelters in addition to downstream processing such as extruders and distributors.

Supply chains for supply to the alumina refineries, aluminium smelters and downstream processes are highly specialised. While the aluminium industry is committed to strong local content, local procurement and local participation, the supply chain must also be competitive, including for raw material supplies.

The COVID-19 pandemic has underscored the importance of manufacturing domestically, supporting a productive and resilient economy. The COVID crisis has demonstrated the advantages of not only the ability to value add within an almost exclusively domestic supply chain but also the importance of local industry which provides the underpinning market for our dependent contracting and manufacturing sector. This capability was able to pivot to meet rapidly changing domestic needs such as sanitiser, face shields and ventilators. The mineral processing and metal manufacturing industries provide not only current regional jobs, but also supports the smart Australian jobs of the future.

In the downstream sector, COVID- 19 interrupted import supply chains for customers who previously sourced materials internationally. This, combined with significant disruption in shipping logistics, meant many companies with international supply chains needed to look for local solutions. Australian aluminium

extruders were able to step into the breach to avoid more significant impacts on other sectors, such as building and construction, by replacing imported supply chain elements with domestic production. For example, solar rail, window and door products reverted to Australian based production to keep their businesses and customers supplied. This experience also applied across critical market segments including defence, heavy transport, ship building, medical equipment, building and construction (residential, commercial and industrial), medical, energy and infrastructure projects. A strong domestic aluminium extrusion sector helps ensure that broader economic activity is able to continue in times of national crisis like COVID-19.

During the first half of 2020, the aluminium and alumina markets collapsed because of COVID-19. While prices have in part recovered, the longer-term future of industry will depend on the rate of recovery of the global manufacturing sector and the impact this has on international demand. The sector has been impacted by border delays during the crisis. While this is, to an extent, to be expected in a black swan event, the crisis highlights the need to further develop risk-based decision making in development of response protocols to reduce delays and take away increased costs (e.g. from demurrage at ports).

What impact would a longer/indefinite disruption have to your firm?

The identification of all the Council's members, and key supply chains, as essential industries was essential in business continuity. The temporary closure in any part of this supply chain could result in chemical instability in alumina refineries or the freezing of an aluminium smelter, risking permanent closure of these operations. The industry, if turned off, cannot simply be turned back on without months of work and expensive capital solutions. Any narrowing of the essential worker definition risked an impact on the aluminium industry's complex supply chain and the permanent closure of alumina refineries and aluminium smelters across the country. Aluminium smelters also play a critical role in the stability of the electricity grid, at periods of both high and low electricity demand. This is crucial in the stable ongoing operation of the electricity market and helps minimise the risk of blackouts.

What actions did you take to manage disruptions?

Members of the Australian Aluminium Council took a number of measures, depending on the regional impacts.

The Council was part of a group of mining industry associations which successfully applied for authorisation to the ACCC to collaborate to respond to shortages in the supply of certain critical services and supplies arising out of the circumstances of the COVID-19 pandemic. This included collaborating to share inventories for, critical mining supplies and services; coordinating scheduling and supply chain activities of those supplies and services; and sharing details of potential suppliers of PPE. The Council also worked with the Department of Industry, Science, Energy and Resources, on critical supply chains.

Some of the critical impacts have been around movement of people across inter regional and state borders. Members of the Council put in place strict protocols in place globally, in line with government guidance and directives, and best practice advice from leading medical experts and international health organisations to keep employees, contractors and partners safe. These range from physical distancing to travel restrictions, roster changes and team splits, to flexible working arrangements, rapid screening and personal hygiene controls. For operational staff, the size of operations and shift patterns naturally limit physical interactions. Our sites already use protective equipment such as respirators, gloves and face protection, in their day-to-day work.

Were these changes temporary or ongoing?

Some changes, such as those around regional borders, were temporary, while others; around physical distancing and hygiene, are likely to be permanent.

What actions could be taken to strengthen domestic supply chains?

While Australia exports the majority of the primary aluminium it produces, around 120,000 tonnes of it is further processed domestically by local manufacturers. This is an important market for billet from Australian smelters. Every tonne of imported extrusion material impacts on the Australian portfolio and ultimately their cash margin. The Australian extrusion market in total is estimated at around 190,000 tonnes. Australia's nine extruders have a nameplate capacity of 150,000 tonnes, however at the moment around 20 per cent of this capacity is idled. Support for the Australian aluminium manufacturing sector could see a growth in domestic production including a restart of this 30,000 tonnes of idled capacity; and more jobs for Australians.

A report by the CM Group in May 2020 (http://www.world-aluminium.org/media/filer_public/2020/05/28/initial_assessment_of_the_impact_of_the_covid-19_on_global_al_demand.pdf), found even accounting for the COVID-19 pandemic, the 30-year global outlook for aluminium demand is strongly positive with a forecast compound annual growth rate of 3.8% over the 30-year period to 2050, resulting in annual demand of approximately 335 million tonnes per year by 2050 (across both primary and secondary aluminium consumption). This is consistent with World Bank projections of 100 million tonnes of primary aluminium metal production by 2050 (<http://pubdocs.worldbank.org/en/961711588875536384/Minerals-for-Climate-Action-The-Mineral-Intensity-of-the-Clean-Energy-Transition.pdf>). The World Bank found that as aluminium is used across a broad range of low emission technologies, it is less susceptible to changes in technology deployment, and it has the highest absolute levels of demand from any of the minerals included in their analysis. As the world's largest producer of bauxite and largest exporter of alumina, and with a wealth of energy resources, Australia should be well placed to capitalise on this competitive advantage in the future.

The biggest challenge facing industry is the delivered cost of energy. Electricity in the Australian market has in recent times been consistently priced in the fourth quartile of global prices for electricity intensive manufacturing. Internationally competitive electricity prices which would drive growth in the electricity intense sector, would require a long-term stretch goal of delivering a first quartile electricity price, with an initial target of achieving second quartile electricity prices. This would move Australia's electricity intensive industries currently facing the question of survival, to being facilities able to attract capital investment and from there through to being able to capitalise on our national energy competitive advantage.

Australia's industry is seeking a restoration of international competitiveness. Efficient deployment of technological changes will support the transition of economically important industrial sectors such as alumina and aluminium, enabling a greater manufacturing sector. In deploying these technologies, Australia will also need to address its relatively high cost capital costs, compared to international competitors.