Chemistry Australia

The Business of Chemistry
Essential for Life

Positioning Australia for Success

Chemistry Australia Policy Priorities

The Role of the Chemistry Industry

Supplying raw materials to make PPE and medical equipment, medical gases, sanitisers, disinfectants and cleaning products

Protecting our water supply through treatments essential for safe drinking water and sewage treatment

Protecting our homes with smart coatings and paint technologies

Enabling food production with crop protection products, fertilisers and irrigation

Keeping food fresher for longer with safe and hygienic packaging solutions

Saving energy in our homes with innovative construction materials

The chemistry industry is a vital contributor to our standard of living and Australia's economy.

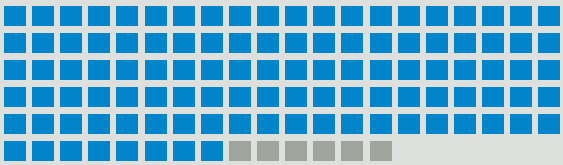
Chemistry is an essential part of our everyday lives; ensuring 25 million Australians can access a safe and plentiful supply of fresh food, clean drinking water, world-class healthcare, energy generation and storage technologies, and high-quality construction materials for our towns and cities.

Of Australia's 114 industries, 108 rely on the chemistry sector for vital materials, products, technologies and innovations.

Industry Snapshot

Delivers **$38 billion** to Australia's GDP

The business of chemistry contributes significantly to the Australian economy and to our way of life. The industry adds value to the nation's natural resources, and passes this investment on through Australia's value chains to further multiply the benefits for the Australian economy and society.



Supplies **108** of Australia's **114** industries

The Australian chemistry industry is strategically significant because of its supply chain centrality. It is a critical enabler of almost every value chain in Australia, a key employer of Australia's valuable STEM capability and a driver of innovation through advanced manufacturing.

3rd largest manufacturing sector

The industry is focussed on strategies for sustainable growth, and is playing an important role in Australia's transition to smarter, value adding, advanced manufacturing. The business of chemistry also develops new materials and processes to help other manufacturing sectors innovate and grow, for example new technologies in 3D printing and flow chemistry.

Invests **$246 million** per annum in research and development

The industry underpins **212,000 jobs** in related supply chains

The Australian chemistry industry transfers investment and growth through value chains, with an important multiplier effect for jobs. This demonstrates the strategic importance of industry that adds to Australia's economic complexity, and builds a diverse and more resilient economy.

5,500 small, medium and large businesses in **every state and territory**

Directly employs more than **61,000 people** in highly skilled jobs

The business of chemistry is a vital part of the STEM ecosystem, providing high quality employment for Australia's valuable university graduates and research capability.

The safety of workers and communities, and the protection of the environment, are the highest priorities for the Australian chemistry industry. The industry is focussed on ensuring that products are being made and used responsibly in workplaces, through supply chains, and across the communities in which they operate. Industry initiatives and programs are underpinned by state and federal regulation.

Policy priorities in response to COVID-19

The coronavirus pandemic has elicited unprecedented action by governments, industries and communities across the globe. The repercussions of these actions have had a profound effect on the lives and health of many; our healthcare and education systems; peoples' jobs and livelihoods; businesses (small, medium and large); and global trade.

As Australia and the rest of the world begin to emerge from the crisis and we look to the future, we have an opportunity to learn from the crisis, challenge our traditional ways of thinking and build a more robust society and economy that not only aids our recovery and gets people back to work, but which shapes a more resilient Australia, providing opportunities for all Australians and positioned to withstand any future crises.

Before the coronavirus pandemic, Australia confronted many significant challenges, including the devastation of the 2019/20 summer fires as well as the challenges of climate change, high energy costs impacting households and the viability of much of Australian manufacturing, and declining economic complexity.

COVID-19 has accelerated the need to address many of these challenges and identify other risks and vulnerabilities for Australia.

Chemistry Australia identified three key themes that it believes will position Australia for success beyond COVID-19. Under these themes – responsible, competitive and smart – actions in nine policy areas are needed to address the immediate and longer-term challenges and make Australia more resilient.

Responsible

Sovereign capability

The expansion of global trade and global supply-chains has enabled the world economy to expand over many decades, improving living standards as more people have shared in the prosperity this growth has delivered. However, this shift in trade has had a significant impact on Australian manufacturing, as it has struggled to remain globally competitive against manufacturing in lower cost jurisdictions operating with economies of scale focused on supplying global markets.

At the same time, modern business structures and disciplines, aided by the growth of sophisticated enterprise resource planning (ERP) platforms, have focused on supply-chain and working capital management efficiency, resulting in a fine balance between supply and demand across many sectors.

The COVID-19 crisis has demonstrated that existing global supply-chains cannot cope with simultaneous increases in demand across all regions of the globe. It has also shown that key parts of those supply-chains are vulnerable to disruption as governments seek to ensure that critical goods are not exported or due to the closure of ports, transport infrastructure or manufacturing plants.

No country would be able to supply all of the goods and services that are needed to maintain a modern society or economy. Global trade will always be critical to the supply of goods and services. This is particularly true for Australia which represents less than 1 per cent of global trade.

Nevertheless, Australia needs to strengthen its sovereign capability to maintain the supply of vital goods and services when global supply-chains are disrupted.

Chemistry Australia calls for:

- Australia's continued commitment to open and fair trade
- The establishment of a comprehensive review that looks to identify:
  - the lessons learnt from the COVID-19 crisis
  - our key areas of vulnerability; and
  - plans to address these vulnerabilities
- Establishment of a national crisis management framework that incorporates a series of predictable and transparent phases to respond for any future crisis, reducing uncertainty for the community and business
- The strategic use of government procurement to underpin the maintenance and/or establishment of sovereign capability, including Australian manufacturing of and/or creation of strategic reserves/inventories of critical products, as well as the local supply of critical services
  - As part of this, amendment of WTO Rules and other trade agreements to enable countries to use government procurement to support their sovereign capability in vital sectors, will be required

Climate Change

Globally, the chemistry industry abates more than twice its carbon dioxide emissions through the products and services it provides households and businesses.

Chemistry Australia member products like insulation materials, marine coating, fertilisers, and lightweight packaging contribute to Australia's Paris Agreement targets as some of the top climate response solutions enabled by the global chemistry industry.*

Climate change policy should be part of globally coordinated action to reduce emissions and mitigate the impact of climate change. It should also strike the right balance between meeting our Paris Agreement commitments and ensuring continued industry investment and jobs growth to underpin our sovereign capability.

Action on climate change should play a key role in Australia's recovery from the economic cost of responding to COVID-19 and getting people back to work.

Chemistry Australia calls for:

- Australia to honour its Paris Agreement commitments and establish domestic mechanisms that deliver emissions reduction in transport and energy generation (technology neutral)
- Prioritisation of emissions reduction in the built environment by building more energy efficient dwellings and buildings
- Mechanisms that ensure Australia's energy-intensive and trade-exposed industries are not placed at a competitive disadvantage
- Assurance that the safeguard mechanism does not operate as a disincentive to investment or force reduced production and productivity
- Retention of the Clean Energy Finance Corporation
- Continued investment in Australian Research Centres and other targeted funding mechanisms to foster innovation and research to reduce emissions, improve energy efficiency and adapt to climate change
- Increased investment in the development of STEM skills that deliver the talent base required to tackle climate change

Environment

Protecting the environment is a key priority for Chemistry Australia's members. It is a critical part of our industry's social licence to operate and the future sustainability of our sector.

The chemistry industry provides the solutions to address environmental challenges – its products improve farm productivity, conserve water and energy and hygienically protect food and grocery items.

Chemistry Australia calls for:

- The introduction of nationally-harmonised environmental protection laws, ideally implemented by a single national environmental protection agency
- Nationally consistent management of hazardous waste
- The enactment of legislation that provides an appropriate framework to meet Australia's commitments under the Stockholm Convention
- A national waste policy that continues to support the ongoing principle of selection of material on merit
- Investment in infrastructure to reduce waste, marine and other litter, and support the circular economy

**Innovation for Greenhouse Gas Reductions*, ICCA, July 2009

Competitive

Balanced Regulation

Regulation in Australia is recognised as inconsistent, complex, costly, and causes business to avoid investment. Companies seeking to invest here comment that while other economies roll out the red carpet, Australia rolls out the red tape.

Chemistry Australia has long advocated for minimum effective regulation that safeguards the community and environment while attracting and protecting investment, enabling Australia to be globally competitive.

The COVID-19 crisis demonstrated that Australia's complex web of regulation across nine different jurisdictions hampered our ability to respond to the crisis across many fronts. At the same time, some regulatory agencies and governments rose to the challenge and provided regulatory flexibility to address the crisis, while others hesitated.

The National Cabinet mechanism established to provide uniform, harmonised and consistent responses to the COVID-19 crisis shows what can be done when all governments work together.

Chemistry Australia calls for:

- Continued deployment of the National Cabinet framework to address key areas for regulatory reform and harmonisation to reduce red-tape; support competitiveness and job creation; and strengthen sovereign capability, while providing appropriate safeguards for the community and environment
- Continued application of the crisis management thinking by regulatory agencies and governments. All future regulatory impact assessments should include a critical evaluation the potential of impacts of regulation on our ability to respond in time of crisis
- Changes to the current review of Workplace Exposure Limits (WELs) to include a full assessment of any proposed changes to limits on Australian manufacturing; the establishment and/or maintenance of our sovereign capability; and the continued availability of important products and chemistry in Australia. Australia's WELs should be consistent with those that apply in other similar economies
- The establishment of a clear list of derogations from normal regulatory requirements that will automatically apply at specific phases of Australia's crisis management framework (e.g. the temporary extension of expiry dates on medical gas cylinders or DG driver's licences to aid the response effort)
- Implementation of the recently enacted Australian Industrial Chemicals Introduction Scheme in a manner that delivers the full benefits to the community and industry
- True national consistent regulation for workplace health and safety, poison scheduling, dangerous goods transportation and precursor chemicals by replacing current model law approaches with applied law schemes
- Establishment of a national dangerous goods regulator and full alignment of Australia's DG transport, handling and storage regulations with international rules to improve supply-chain flexibility
- Reform of major hazard facilities regulation to establish a single national regulator and regulatory scheme

Affordable Gas and Electricity

Affordable gas and electricity are essential for Australia to recover from the economic cost of COVID-19, to support those Australians whose livelihoods of been impacted and to get people back to work. Affordable and globally competitive gas and electricity are also vital elements in the strengthening of Australia's sovereign capability and for the continued viability of Australian manufacturing and many other industries.

Yet, the high cost and unreliable supply of gas and electricity has been damaging Australian industry, commerce and households. Australia's energy market and the supply of globally competitive long-term gas feedstock contracts were once the envy of the world and formed the basis of vast investment in Australia.

Much more needs to be done to protect consumers from escalating energy prices and attract capital investment for gas-based and other manufacturing. Chemistry Australia reiterates the principles of the National Energy Objectives where investment is clearly focussed on benefits for consumers.

Chemistry Australia calls for:

Gas

- The development of a national domestic gas strategy that establishes a globally competitive long-term contract market for gas-based feedstock and energy users by:
  - Ensuring domestic prices do not incorporate a premium equivalent to the capital and financing costs of LNG export infrastructure
  - Implementing policies that prioritise gas availability and supply for domestic use at sustainable prices
  - Continuing reforms to address the concentration of market power
  - Implementing policies that reserve valuable natural gas liquids for domestic industries
- Transitional certainty for gas users to bridge the imminent supply gap and long -term investment environment
- Introduction of a 'use it or lose it' mandatory development regime
- Investment in pipelines and other infrastructure to bring new gas supply to market
- Continued gas market reform to increase transparency for consumers
- Investment in gas storage facilities to secure more reliable gas supply and mitigate short-term price peaks

Electricity

- Policies that support a balance of affordability, reliability and emissions targets
- Implementation of the ACCC's recommendations from its Retail Electricity Pricing Inquiry
- Climate Change Policy that delivers certainty for investment in energy generation in the most cost-efficient manner

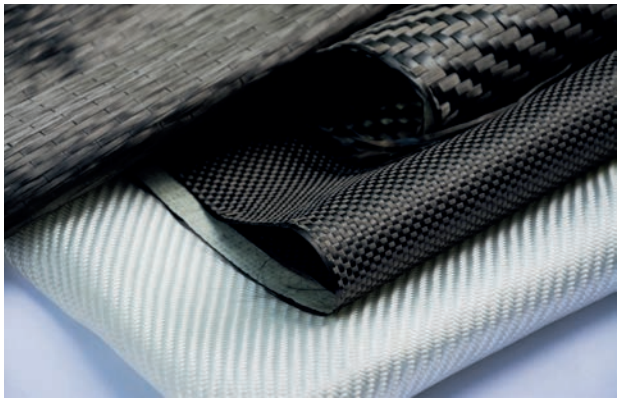
Taxation

A competitive tax system will be a key element in strengthening Australia's sovereign capability and our recovery from the economic impacts of COVID-19.

The taxation system must be reformed to support job creation by lowering the cost of employing Australians, to attract investment and to deliver growth to protect the nation's prosperity for future generations.

Chemistry Australia calls for:

- A comprehensive review of the tax system focused on job creation and employment. This review should also consider:
  - our competitiveness with other economies
  - investment and innovation
  - incentive to work
  - reducing complexity and compliance costs.
- Maintenance of the current R&D tax incentive and additional incentives for collaboration between business, research and universities
- Accelerated depreciation and other measures to encourage investment in energy and manufacturing in Australia



Fair and Open Trade

Fair and open trade is vital for the Australian economy to succeed in a global market and for sustainable economic development. The supply of raw materials, goods and capital equipment will also strengthen Australia's sovereign capability.

Chemistry Australia calls for:

- Free, fair and open trade with other countries
- Reduction of global tariff barriers to achieve open trade
- Action to address the rise of technical and non-tariff barriers in overseas markets. Differing product standards and requirements between countries can negatively impact the flow of goods and supply-chain flexibility in times of crisis
- A strategic review of government procurement rules in WTO and other trade agreements to ensure that countries, including Australia, can leverage government procurement to establish and support their sovereign capability for certain categories of goods and services
- Proactive government consultation with affected industry sectors on future free trade agreements
- Strengthening of the international trade remedies framework to ensure that key Australian manufacturing capabilities are not lost to unfair trading practices and by imposing effective measures to prevent circumvention of trade remedies
- Maintenance of the International Trade Remedies Forum (ITRF)
- Improved transparency and access to ABS data to support affected Australian industries to seek relief

Smart

Innovation and Manufacturing

Manufacturing provides nations with economic resilience and strengthens sovereign security. At its peak in the late 1950s and early 1960s, Australian manufacturing represented around 30 per cent of Australian GDP. By 2018, it had declined to 5.7 per cent of Australian GDP.

The Department of Industry, Innovation and Science recently described Australia's economic complexity "as an anomaly among advanced economies, with the economic complexity closer to that of a developing country".

The COVID-19 crisis has clearly demonstrated that the decline of Australian manufacturing represents a risk to the Australian community and economy when key global supply-chains are disrupted. The crisis has also highlighted that Australian manufacturers are innovative and agile, stepping up to address many product shortages. A systematic strengthening and leveraging of this strategic capability must now be a priority.

Prior to COVID-19, Chemistry Australia had called for the development of a manufacturing White Paper to set a 20-year vision for fostering investment confidence among large, medium and small manufacturing business. COVID-19 has highlighted the urgent need for a strategic review of Australian manufacturing focused on strengthening Australia's sovereign capacity.

Innovation collaboration between industry, research and academia can accelarate commercial outcomes and deliver job-ready graduates. Successful models exist that need to be further supported and expanded to build future capability and capacity.

Chemistry Australia calls for:

- An industry policy that sets a long-term vision that fosters investment confidence among large, medium and small manufacturing businesses
- The policy should address:
  - Attraction of capital and investment
  - Critical issues of national security and sovereign capability, including the need for ongoing refinery capability
  - Australia's loss of economic complexity
  - The inextricable link between innovation and manufacturing at scale
- Industry policy to drive energy policy
- Support the circular economy by facilitating investment in chemical and mechanical recycling of plastics to meet the objectives of the National Waste Policy
- Continued investment in the Northern Australia Infrastructure Fund to support the development of a gas-based manufacturing industry
- Continued investment in Australian Research Centres and other targeted funding mechanisms to foster collaborative innovation and research to reduce emissions, improve energy efficiency and adapt to climate change

Education and Skills

Australia needs to continually update the skills of its workforce to maintain its sovereign capability and ensure it remains ahead of changing market opportunities rather than falling behind. This will enable Australia to compete for skilled technical workers in a global market, ensure today's STEM graduates play a role in tomorrow's challenges and respond to future crises like COVID-19.

Chemistry Australia calls for:

- Greater investment in STEM literacy education for all Australian school students
- Continued government support for industry collaboration with universities and the CSIRO
- Investment in tertiary programs to provide education to address the gap in regulatory science capability in Australia and around the world
- Investment in vocational training that builds the skills needed to address the changing nature of work and which builds a suitable level of "reserve-like" skills and expertise that can be readily deployed to support Australia's capacity to deal with future crises

**Industry Insights,* Globalising Australia 2/2018, June 2018

About us

Chemistry Australia is the pre-eminent national body representing the $40 billion Australian chemistry industry, one of the largest manufacturing sectors in the country.

Our members are positioned across the entire value chain including manufacturers, importers and distributors, logistics and supply chain partners, raw material suppliers, fabricators, compounders, recyclers, research academia and service providers to the industry. Their businesses range from small family-owned companies to leading national and multinational enterprises.

The Business of Chemistry Essential for Life

Supporting Australia's mining and resources industry with specialist mining equipment, chemicals, technologies and services to more efficiently extract and process minerals and precious metals.

Providing clean drinking water through advances in disinfectants that kill germs and prevent disease, polymer membrane filters that remove impurities, and materials for pipes that protect water from the source to the tap.

Enabling the future of energy with sustainable technologies that are revolutionising the way we generate and store energy, including new developments in solar cells, wind turbines, and rechargeable batteries.

Ensuring a safe and plentiful food supply by protecting plants from pest infestation, and increasing crop production through the use of fertilisers, high-yield seeds and irrigation infrastructure. Smart packaging reduces spoilage and prolongs shelf life, enabling Australian growers and food manufacturers to reach international markets.

Helping to build our homes and cities with advanced technologies and materials developed for more efficient construction and transport, as well as innovation in coatings, insulation, adhesives and sealants.

Improving public health through medical breakthroughs and innovative technologies that help to protect against infection, prevent disease and improve treatment options.

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