



Government of Western Australia
Department of Mines, Industry Regulation and Safety



Energy Safety Business Plan

2022–23





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Acknowledgement of Country



Building and Energy acknowledges the traditional custodians across Western Australia, paying respect to their culture and their contribution to the land, waters and community.

We pay our respects to all members of the Aboriginal communities and to Elders, past, present and emerging.

Foreword



Building and Energy is Western Australia's technical and safety regulator for the electricity industry and most of the gas industry as well as the regulator for the building, building surveying, plumbing and painting industries. I am pleased to present the 2022–23 Business Plan, which relates to Building and Energy's activities in administering electricity and gas technical and safety legislation.

This Business Plan is a key part of the process for the yearly industry funding of these activities, as required by the legislation. Once the Business Plan is approved by the Minister, it will form the basis for the Minister's determination on the overall fixed amount to be levied on energy industry participants, and the manner in which it is to be allocated between participants for 2022–23.

The Coronavirus (COVID-19) presented some extraordinary challenges to industry and, as the regulator, we were not immune to them and had to adapt in the way we do business too. We have had to ensure we maintain our services to ensure the safety of electricity and gas consumers and the broader community is not compromised.

During 2021–22, we delivered on a number of initiatives. We reviewed our risk-based compliance strategy and published new Guidelines for Network Operators' Inspection System Plans (ISPs). These ISPs are the cornerstone of our regulatory framework and play a critical role in ensuring the safety of consumer installations. We also ran several successful campaigns to raise public awareness about the importance of maintaining and using gas appliances for what they are designed for and the dangers of carbon monoxide poisoning. The "Great Outdoors, Lethal indoors" campaign will continue through 2022–23. We are proposing to run a media campaign to raise consumer awareness about their responsibilities in regard to private power poles and another campaign to raise awareness about safe use of electricity.

We also intend to enhance our inspection activities and inspect a larger proportion of off-grid solar and standalone power systems and undertake more inspections in remote communities. Emerging technology will continue to play an important part in Western Australia's energy future. Building and Energy has begun work reviewing relevant existing legislation and technical standards to ensure they keep pace with developments in the energy sector. This work will continue through 2022–23. It will also include working with other technical safety regulators across Australia and Standards Australia on the development of technical standards to facilitate the blending of hydrogen in the gas networks.

I would like to take this opportunity to thank our dedicated staff and all designated inspectors, not only those employed by Building and Energy, but also those employed by the electricity and gas network operators, for their contribution to electricity and gas safety in Western Australia.

Saj Abdoolakhan
Director of Energy Safety
 December 2021

About this Business Plan

This document sets out the 2022–23 Business Plan for the energy safety functions performed by the Building and Energy Division (Division) of the Department of Mines, Industry Regulation and Safety (DMIRS).

The Business Plan focuses solely on the delivery of functions of the Director of Energy Safety and the administration of technical safety regulations made under the *Electricity Act 1945* and *Gas Standards Act 1972*. These Acts and associated regulations set out the minimum technical safety requirements to which consumer electrical and gas installations and networks in WA must be constructed and maintained. The primary objective of the energy safety legislative framework is the safety of energy consumers and the community at large.

The Business Plan has been prepared to meet the intent of section 4 of the *Energy Safety Act 2006* and includes a statement of intent; the business environment and challenges, including major initiatives; the financial plan; ongoing and planned initiatives; details of the proposed 2022–23 energy industry levy; and achievements.

Upon approval by the Minister, this Business Plan will form the basis for the determination on the amount to be levied on energy industry participants for 2022–23 and the manner in which it is to be allocated between participants.

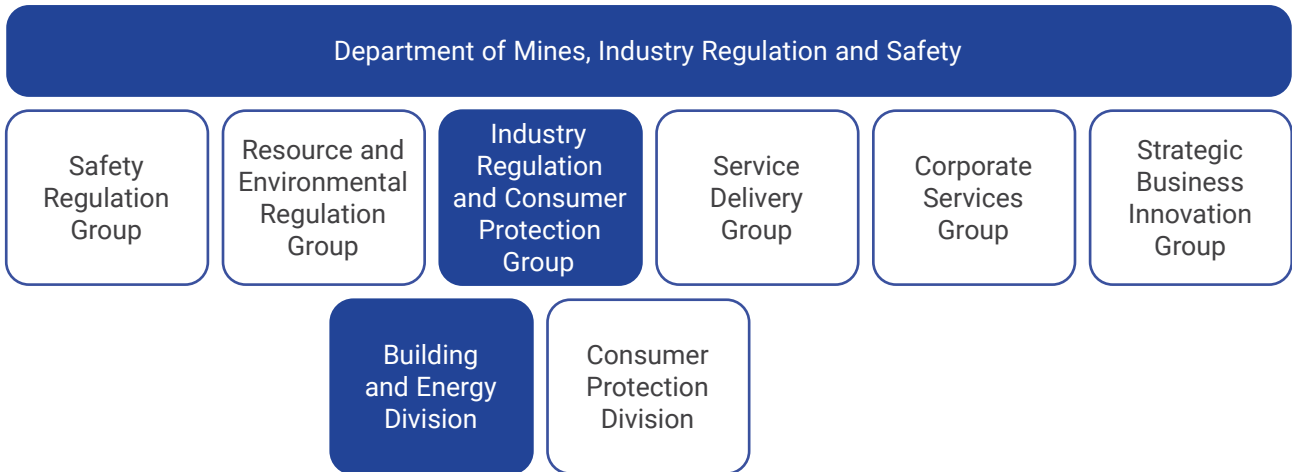
The Business Plan is divided into Building and Energy's three strategic priorities including **Consumer Safety**, **Industry Safety** and **Network Safety**, as represented in the figure below.



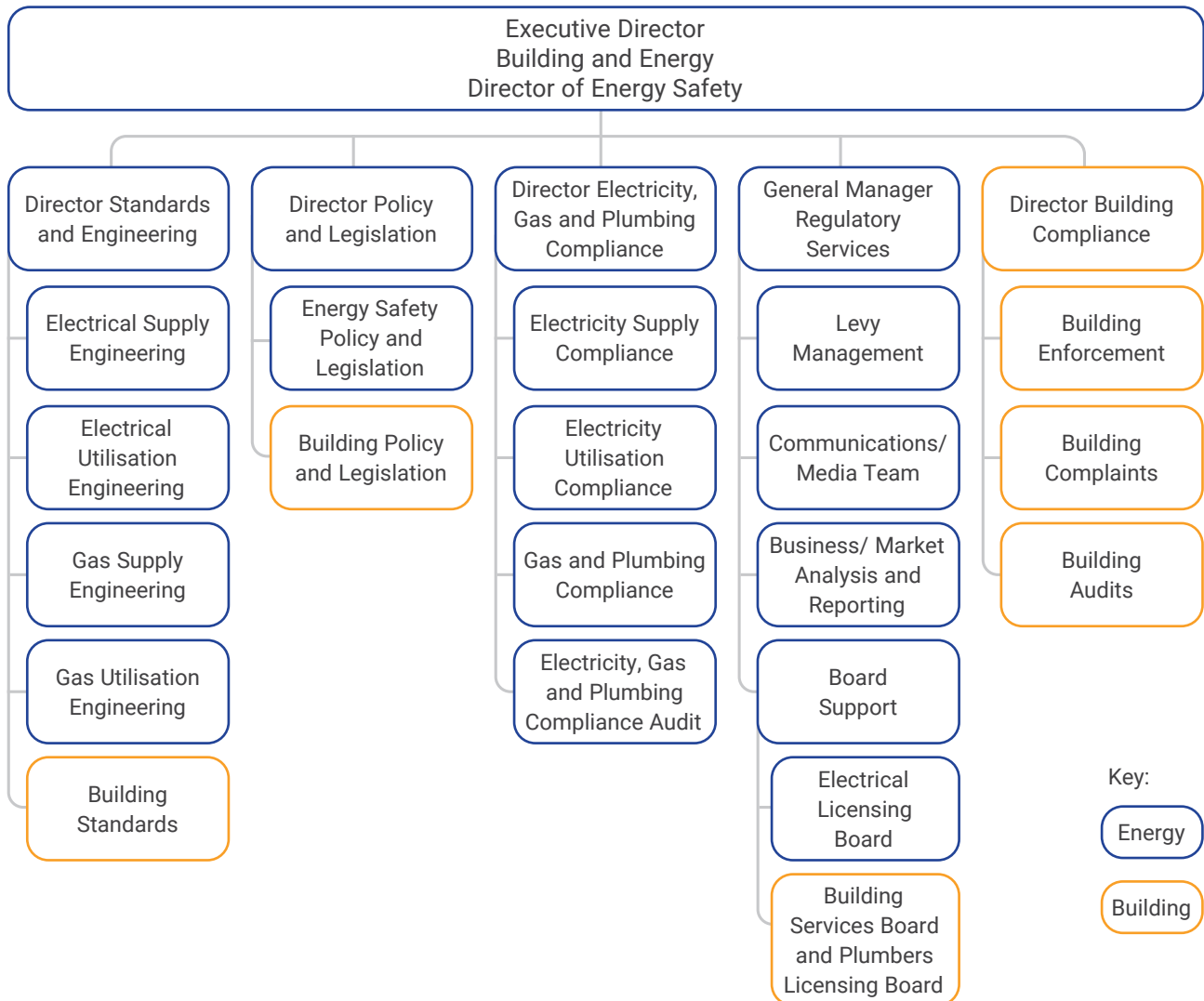
About Building and Energy

Building and Energy was established in January 2018 as a Division of the Department of Mines, Industry Regulation and Safety (DMIRS). The Division is the State’s building, plumbing and energy safety regulator. It administers a suite of building and energy safety legislation and supports the statutory offices of the Building Commissioner and the Director of Energy Safety.

Where we fit within DMIRS



Building and Energy Division Structure



The statutory office of the Director of Energy Safety

The Director of Energy Safety (Director) is an independent statutory office established under section 5 of the *Energy Coordination Act 1994*. The Director and supporting staff ensures that the legislation covering electricity and gas safety is effectively administered, maintained for currency and appropriately communicated to stakeholders.

Legislation administered

The Director of Energy Safety and his staff administer the following legislation:

- *Energy Safety Act 2006*
- Energy Safety Regulations 2006
- *Energy Safety Levy Act 2006*
- *Energy Coordination Act 1994 (other than Parts 1A, 2A, 2B, 2C and 2D)*
- Energy Coordination (General) Regulations 1995
- *Electricity Act 1945*
- Electricity (Licensing) Regulations 1991
- Electricity Regulations 1947
- Electricity (Network Safety) Regulations 2015
- *Gas Standards Act 1972*
- Gas Standards (Gasfitting and Consumer Gas Installations) Regulations 1999
- Gas Standards (Gas Supply and System Safety) Regulations 2000
- Gas Standards (Infringement Notices) Regulations 2007
- *Gas Supply (Gas Quality Specifications) Act 2009 (Part 5)*

Core Energy Safety functions



Administer electrical and gas worker and contractor licence schemes.



Prescribe minimum safe work practices for the electrical and gas industries.



Prescribe technical safety standards to which electrical and gas-fitting work must be completed.



Set and oversee the inspection regimes for work on electrical and gas installations.



Audit electrical network operators and gas suppliers to ensure compliance with approved inspection system plans.



Audit electrical and gas workers and contractors' compliance with legislation.



Administer electrical and gas appliances control schemes.



Investigate breaches of electrical and gas safety laws and pursue prosecutions and disciplinary actions under the licensing schemes.



Investigate serious electrical and gas accidents (including fatalities).



Prescribe safety requirements for electricity and gas networks.



Audit electricity network operators' compliance and gas suppliers' compliance with electricity and gas networks safety legislation.



Investigate electricity and gas network safety incidents.



Educate operatives in the electricity and gas industries.



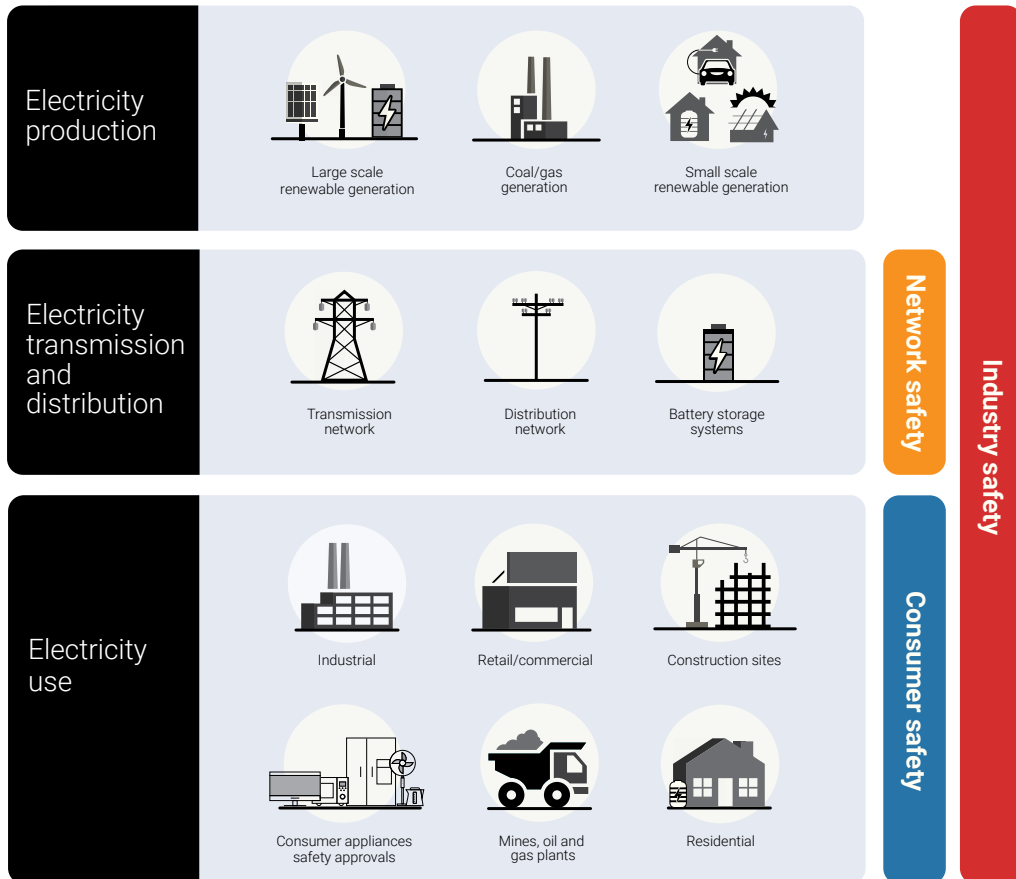
Raise consumer awareness about electrical and gas safety.

What we regulate

Our regulatory functions can be summarised as covering the technical and safety regulation of: electricity production; electricity transmission and distribution; electricity use (consumers' installations and appliances); gas distribution (and gas production plants connected to gas distribution systems); and gas use (consumers' installations and appliances). The following diagrams provide an overview of the WA electricity and gas regulatory frameworks. Building and Energy also regulate the licensing of electrical and gas workers to ensure only competent workers are licensed to carry out electrical and gas fitting work. Electrical Licensing is overseen by the Electrical Licensing Board.

Building and Energy's role within the Energy Regulatory Framework

Energy Safety compliance functions



Gas regulatory framework



Statement of Intent

Purpose and Approach:

Building and Energy embraces the purpose and approach of DMIRS, which is as follows:



Purpose: Supporting a safe, fair and responsible future for the Western Australian community, industry and resources sector.



Approach: Maximise our impact as a regulator, service provider and policymaker.

Objectives:

We share DMIRS objectives. This inter-departmental alignment drives change across the state, of which Building and Energy play a pivotal role. The following objectives are pertinent to the Energy Safety Business Plan 2022–23:



Better Places: A quality environment with liveable and affordable communities, and vibrant regions.



Strong Communities: Safe communities and supported families.

Functions:

Building and Energy has four key functions (Policy and Standards, Education, Licensing, Compliance), that collectively address the Division's strategic priorities. Functional areas are represented in the outer ring of the figure below. Building and Energy's three strategic priorities include **Consumer Safety**, **Industry Safety** and **Network Safety**.

The Business Plan is divided into these three themes. The fundamental priority underpinning Building and Energy's work is community safety.



DMIRS Departmental Performance

In 2018–19, DMIRS transitioned to a new outcome-based management framework. The framework was developed by the State Government as a systematic process for adoption by Agencies in order to improve their effectiveness as an organisation. The outcomes are linked to the broader State Government Goal - Strong Communities: Safe communities and supported families. Building and Energy contribute to the wider DMIRS performance against two (2) of its key performance indicators;

Key effectiveness indicator: Stakeholder satisfaction with DMIRS as an effective industry regulator was 66 per cent against a target of 75 per cent.

Key efficiency indicator: Average cost per transaction to deliver industry advice and regulatory service was \$201, against a target of \$193.

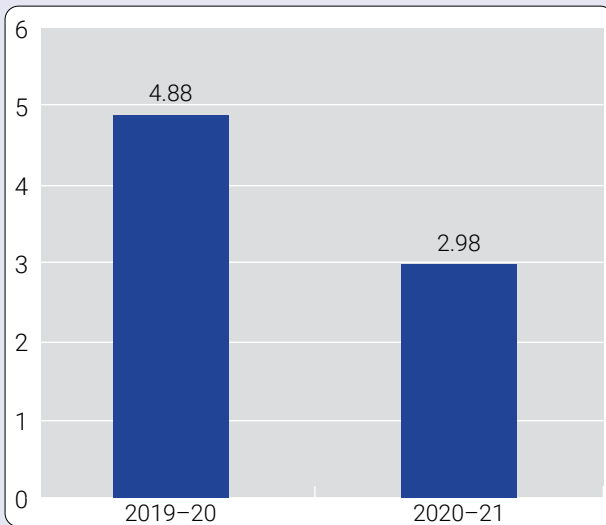
Energy Safety Performance

Building and Energy assesses its performance at a divisional level through two (2) key performance indicators that measure the number of serious injury incidents involving electricity and gas in Western Australia.

1. Key Energy Safety Indicator

Electricity

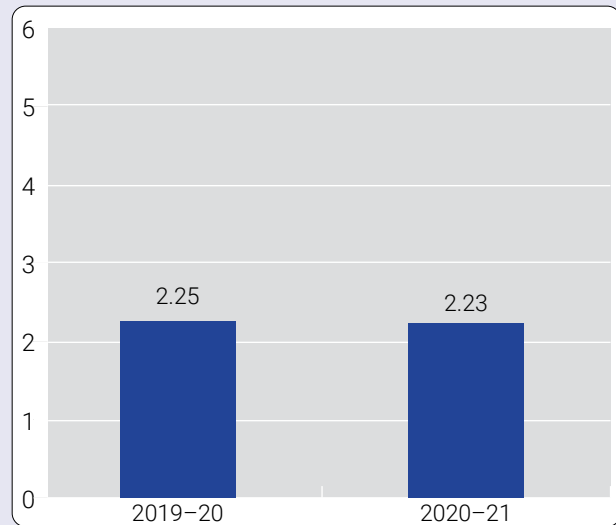
Number of electricity-related serious injuries and fatalities per million population (Target = 0).



2. Key Energy Safety Indicator

Gas

Number of gas-related serious injuries and fatalities per million population (Target = 0).



Advice to the Minister

The Director of Energy Safety provides advice and support to the Minister.

The Director of Energy Safety, Deputy Director General of the Industry Regulation and Consumer Protection Group and the Director General of DMIRS are the conduit for interactions between the Minister's office and the department. Advice and information Building and Energy provide to the Minister includes:

- Proposals and status/management reports for major policy projects;
- Proposed regulatory actions that may affect the public or businesses;
- Information releases dealing with subjects relevant to the Ministerial Portfolio;
- Reports on the status of major investigations or audits;
- Briefings on contentious energy safety issues;
- Responses to enquiries if requested to do so by the Minister or their staff;
- Resource requirements and work programs; and
- Nationally-sensitive energy issues.

2020–21 Snapshot

Inspections and Investigations

18

Building and Energy Inspectors



162

Designated Inspectors (Network Operators and Type B)

Compliance inspections



30,200
Electricity

4,400
Gas

Investigations



322
Electricity

248
Gas

Industry education and public awareness initiatives



50,000

Stakeholders engaged through industry communication.



135

Industry training sessions and advice delivered:

- Advice on licensing matters.
- Training sessions/demos on industry requirements.



15

Presentations delivered to industry at:

- Industry member nights.
- Industry conferences.
- TAFEs.



2

major public awareness campaigns delivered:

- 'Shocks and Tingles' campaign.
- 'Tick, tick, tick' campaign reminding consumers to service gas heaters.

Other achievements

Enhancements to the risk-based compliance frameworks for electricity and gas installation work:



Upgrades to eNotice, defects and accidents reporting portals.



New Guidelines for electricity network operators and gas suppliers Inspections System Plans (ISP) published.



Improved intelligence about work on installation involving distributed energy resources.



Approval of New ISP's for all electricity network operators and gas suppliers.



Re-prioritisation of compliance activities based on new risk-profiles.

Adapting legislation to the changing landscape:



The Electricity Network Safety Regulations 2015 amended to adapt to the Government's Energy Transformation Strategy.



Enhanced communication with industry to assist with their compliance with relevant regulation amendments.

Strategic Context

The Operating Environment

We operate in a highly dynamic environment that demands a balance between maintaining our ongoing activities and adapting to the rapidly evolving technological landscape.

Building and Energy has evolved into an agile team to facilitate this operating environment, working around environmental changes to achieve its purpose and supporting a safe, fair and responsible future for the Western Australian community, industry and consumers.

This plan has been developed to mitigate against the foreseen business challenges while ensuring the continuation of the current safety regimes for consumers, industry and networks.

Increased activity resulting from a booming economy

The Western Australian Government's management of COVID 19 has been world-leading and ensured most industries continued to operate, albeit not necessarily at full capacity, throughout these challenging times. The energy sector adapted to the challenges and found innovative ways to continue to provide its services.

The electrical contracting and gas fitting industries saw a significant increase in activity, mainly as a result of the introduction of the Western Australian (WA) Government's Building Bonus and Australian Government's Home Builder incentives and a booming WA economy.

The volume of work in the industry, as evident by the number of notices, Building and Energy receives has grown significantly compared to the pre-boom period.

The number of licensed operatives in both the gas and electricity sections have risen to similar levels to the peak of the previous mining boom.

In 2020–21, Building and Energy administered 50,605 electrical licensees (1.2 per cent decrease on 2019–20 total) and 8,484 gas permits/authorisations (3.2 per cent increase on 2020–21) holders.

This increased activity in the sector led to an increased demand on our services. We have adapted our risk-based compliance program and are constantly reviewing our operational plans to ensure we can continue to maintain an optimum level of service to the community.

Ageing workforce

Building and Energy employs a team of specialist professional engineers and experienced technical inspectors to undertake its activities and meet its obligations.

In July 2020, the Office of Chief Scientist released its latest report on Australia's STEM workforce. It shows the engineering workforce ageing at a rapid rate, with 60 per cent over the age of 45. Building and Energy's engineering and inspector workforce is consistent with this trend.

For several years, we have found it particularly challenging to attract and retain technical staff. There is no indication that this trend will change during the course of this Business Plan and some changes of practice, prioritisation and rescheduling of work programs over time has become necessary while we continue to work towards finding a solution.



Changing consumer behaviours

A changing marketplace profile, owing to a greater reliance on imported electrical equipment and the increased reliance on non-traditional retail sources such as the internet, has significantly increased the risk of unsafe electrical equipment being supplied and used in Australia.

Building and Energy has had to adapt by utilising a mix of pre-market and post-market surveillance. Raising consumer awareness about the dangers of using appliances, which are not approved for use in Australia, remains one of the most effective tools to address the issue.

Safety of Future Energy Technologies

Emerging technologies will require changes to multiple legislation, some first drafted over 60 years ago, driving flow-on amendments to Regulations, Codes of Practice and Licensing. Building and Energy is working on a range of activities to support and facilitate the government's broader initiatives in this sector. This includes a review of the legislative framework to ensure it can adapt to technological advancements.

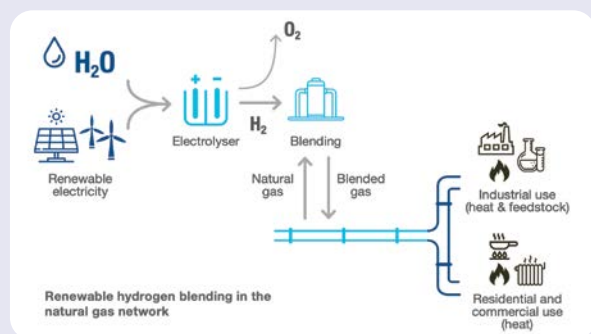
Western Australian
Renewable Hydrogen
Roadmap
November 2020



Hydrogen blending trial

Western Australia has a vast gas reticulation network and a unique customer base. Blending up to 10 per cent renewable hydrogen into the natural gas network could reduce the emissions intensity of gas combustion by up to 13 per cent. This offers an opportunity to partially decarbonise gas consumption and a step towards deeper decarbonisation in the longer term.

During 2022–23, Building and Energy will continue to engage with stakeholders and provide technical support to assist the hydrogen blending pilot project in WA. The project is examining the feasibility and implications of blending a low concentration of hydrogen into a localised natural gas distribution network in Perth Metropolitan area.



Western Australia renewable hydrogen industry

Western Australia's renewable hydrogen industry will be a major producer, user and exporter of renewable hydrogen. Building and Energy has been working closely with the Department of Jobs, Tourism, Science & Innovation, contributing to Western Australia's Renewable Hydrogen Strategy.

We are working collaboratively with industry on several initiatives to support the Strategy, including:

- Australian-first renewable energy microgrid in the Gascoyne town of Denham, using a new solar power system to produce hydrogen from water.
- ATCO's hydrogen refueler project in Jandakot that will develop, deploy and operate the first green hydrogen refuelling station in WA.
- Regulatory reform package to undertake and support a local hydrogen industry.
- Work is also underway to develop units of competency for gasfitters to work on hydrogen gas installations and to develop technical standards to ensure the safety of these initiatives.

Energy transformation

The Western Australian electricity sector is undergoing a rapid and accelerating transformation underpinned by technological advances, new business models and evolving consumer preferences. Small-scale renewable energy systems connected to the distribution network make up an increasing share of the mix of generation technologies. This transformation has created new challenges for Building and Energy.

We have begun a holistic review of our legislative framework in the context of the WA Government's Energy Transformation Strategy and the increasing prevalence of Distributed Energy Resources.

Consumer Safety Achievements

Building and Energy manages several initiatives to ensure safety of consumer installations. This ranges from setting technical standards for electrical and gas fitting work, through maintaining an inspection regime to ensure work undertaken on consumer installations are safe, to raising consumers' awareness about the safe use of electricity and gas.

During 2020–21, the following compliance activities were undertaken:



180

Designated Electrical and Gas Inspectors



186,400

Electrical and Gas Notices of Completion received



34,600

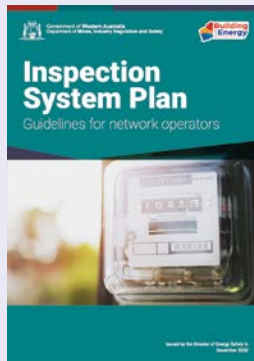
Installations inspected in accordance with Inspection System Plans



570

Investigations

Several public awareness campaigns have been undertaken during 2021–22 to educate the community and industry on the hazards associated with electricity and gas.



Improvements to the inspection regimes – New Inspection System Plan Guidelines

Western Australia is one of the few jurisdictions in Australia where a statistically significant sample of work undertaken on electrical and gas installations are inspected regularly.

Network operators are required to inspect all work for which they receive a notice or a sample of this work if they have an approved Inspection System Plan. The sampling system is based on the historical safety performance of the operatives, volume of work they undertake, and the complexity of the installation work undertaken.

These inspection regimes are critical to ensure the safety of consumer electrical and gas installations.

Guidelines that set out the core elements, which electricity network operators must address in their respective Inspection System Plans, were previously published by the Director in 2013. Following a review of the effectiveness of the previously approved Inspection System Plans, the Director published new Guidelines for both electricity and gas network operators.

Network operators have been engaging with Building and Energy on the development of their respective plans to meet the new Guidelines and have been progressively approaching Building and Energy seeking approvals.

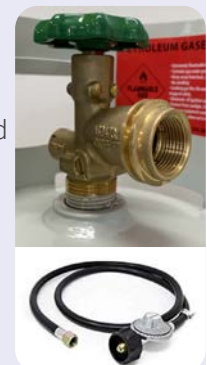
Gas consumer safety

LPG appliances has been the biggest contributors of gas related incidents. Many of the incidents resulted from gas leakage due to a weakness in the current (Type 21 'POL') cylinder valve, present in 3kg and 9kg gas cylinders.

Building and Energy has supported extensive research to find a solution to the problem and in late 2020 an amendment to the AS/NZS 5601 was published, introducing a thermal cut out device and requiring a positive connection before gas can flow out of a cylinder. The changes have been implemented to prevent gas leakage and improve safety outcomes.

This will see the replacement of the current connection on LPG cylinders to a safer cylinder connection (LCC27).

Building and Energy will also continue its initiatives to raise consumers' awareness about the safe use of gas appliances.



Consumer Safety Outcomes and Initiatives

Shocks and Tingles electrical safety awareness campaign - extended

Electricity consumer safety

The nature of some electrical accidents identified that there was a need for greater public awareness. Shocks and tingles can be warning signs of a degraded or broken neutral connection, resulting in a voltage rise in the earthing system, causing metal objects in and around a building to become live at dangerous voltages.

It was evident that consumers were not paying attention to shocks and tingles and, in many cases, had they acted on the tell-tale signs, some of the more serious accidents could have been avoided.

As a result, during 2019–20 and 2020–21 Building and Energy, in partnership with Western Power and Horizon Power, developed the “Shocks and Tingles campaign” urging Western Australians to report immediately any electric shocks or tingles to network operators.

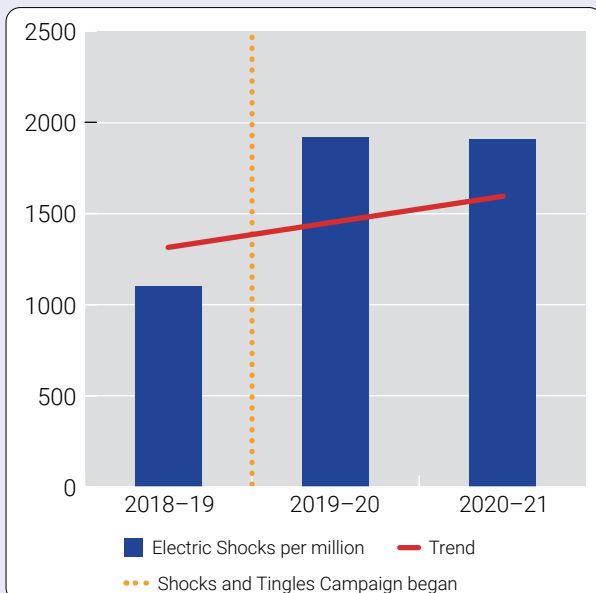
The campaign saw a significant increase in the number of shocks reported to network operators.

In many cases, the early reporting by consumers has enabled early detection of faults. Based on the increased consumer reporting taking place, it is evident that the campaign has been successful in raising consumer awareness of the issue.

Building and Energy also continues to work with industry to raise the standards of work on electrical installations and ensure adequate verification and tests are undertaken at all times.



Electric shocks per million population in Western Australia



Gas appliances campaigns

In the recent past there have been several fatalities across Australia associated with carbon monoxide poisoning. The last two fatalities occurred in a tent near Wedge Island, north of Perth, in 2019 and involved a portable liquefied petroleum gas-operated refrigerator.

Faulty or inadequately serviced open flued heaters or the incorrect use of gas appliances were the main contributing factor in all of these accidents.

Open flued and flue-less gas space heaters pose a safety risk if there is inadequate ventilation. With houses becoming more energy efficient and air tight, and powerful exhaust fans being installed, the risk of carbon monoxide being drawn back into the homes rather than escaping out the flu has increased considerably. Regular servicing is essential to support the safe functioning of heaters and all gas appliances.

Building and Energy’s “Tick, Tick, Tick” campaign was launched early in 2021–22 and has been very successful in raising consumers’ awareness about the issue.

Over the past 18 months, Building and Energy has seen an increase in incidents where outdoor portable gas appliances have been used indoors. The use of these appliances indoors can lead to serious accidents, including fatalities. Our “Great Outdoors, Lethal indoors” campaign is designed to raise awareness about the issue. The campaign will commence in 2021–22 and will continue through 2022–23.

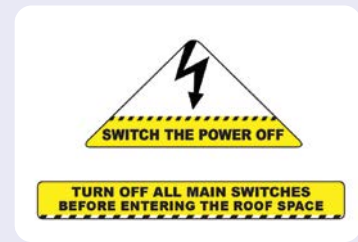


Consumer Safety Initiatives

Managing hazards in roof spaces of domestic dwellings

There are inherent risks of electric shocks occurring in roof spaces of domestic dwellings. All workers performing work in domestic dwellings are required to turn off all sources of electricity at the main switchboard before entering the roof space.

Building and Energy will launch a public awareness campaign in 2022 to raise awareness about the electrical dangers that can exist in roof spaces and urging consumers to switch the main power off before any person enters the roof space. The campaign will include the distribution of a sticker for home owners to affix to roof access covers, serving as a reminder to anybody entering the roof space of a property.



Safety of appliances – New EESS Platform

Consumer exposure to the risks of electricity and gas is greatest when using their energy appliances. Building and Energy administers legislation which aims to minimise the hazards of electricity and gas and to reduce the risks of electric shocks, fire, explosion, burns and asphyxiation.

Under an Inter Governmental Agreement between Queensland, Victoria, Western Australia and Tasmania, the Electrical Regulatory Authorities Council administers the Electrical Equipment Safety System (EESS) on behalf of the participating jurisdictions. The EESS is supported by databases for Responsible Supplier registration and equipment registrations, and facilitates public search for certain information relating to household electrical equipment.

Building and Energy continues to work with its counterparts to address these challenges and deliver on a new EESS Platform which, amongst other benefits for regulators, will improve consumers' ability to check whether appliances are approved.

Code	Name	Description	2023 Target Completion
CS1	Community awareness campaigns	Conduct the following campaigns: <ul style="list-style-type: none"> Media campaign to raise consumer awareness about safe use of electricity. Private Poles – improve consumers' awareness about their responsibilities to adequately maintain private power poles on their properties. 	✓
CS2	Promotion of electrical and gas safety in schools	Raising awareness amongst school kids about how to use electricity and gas appliances safely.	Ongoing
CS3	Improvements to the compliance regime	Improvements including: <ul style="list-style-type: none"> eNotice platform updates. Approval of inspection safety plans for Electricity and Gas network operators. 	✓
CS4	Compliance campaigns	Inspection regime programs targeting: <ul style="list-style-type: none"> Off grid solar and standalone power systems inspection program. Large scale distributed energy resources installations. LPG Inspection in remote communities. Caravan parks inspection and education. 	Ongoing
CS5	Emerging technologies safety strategy	Development of a strategy and roadmap to manage the safety requirements for emerging technology including: <ul style="list-style-type: none"> Hydrogen. Battery storage systems. Standalone power systems. 	✓

Industry Safety Achievements

During 2020–21, the following industry development initiatives were delivered:



150

Training sessions, advice and presentations to industry members



7

Industry publications produced



15

Presentations to industry

Working closely with the Electrical Licensing Board

Building and Energy has been working closely with the Electrical Licensing Board to improve safety outcomes for consumers and enhance competency in the industry.

Members of the Board are appointed by the Minister for Commerce. They each represent different industry groups and the interests of energy consumers.

During 2020–21, Building and Energy worked with the Board to deliver on a new “Fit and Proper Policy” which will ensure consistency in assessing matters relating to an applicant’s fitness to be licensed. In response to challenges posed by the COVID-19 pandemic, the Board also implemented a strategy to support the completion of electrical apprenticeships during the period of economic volatility.



Board Members

Front (L-R): Christopher Sweeting, Natalia Kostecki-Baranski, Geoffrey Kelly.

Back (L-R): Momcilo Andric, Melissa Mammone, Peter Beveridge (Chair), Peter Carter.

Educate and encourage through presentations to industry

We partnered with training organisations, industry organisations and unions to provide educational seminars and professional development opportunities.

Building and Energy, in collaboration with NECA, conducted presentations at regional industry nights in Northam, Geraldton, Port Hedland and Karratha. Building and Energy also presented at 2021 IDC Technologies High Voltage WA Conference discussing the department’s function as the electrical regulator in Western Australia and its perspective on inspecting high voltage installations.



Industry Association Collaboration

We work closely with leading industry associations sharing information and expertise. These include delivery training at forums held by:

- Master Electricians
- National Electrical Contractors Association
- Master Plumbers and Gasfitters Association

Safety alerts and industry newsletters

In 2020–21, Building and Energy distributed four newsletters and 13 e-letters to almost 50,000 subscribers.

These publications inform operatives about trends in the sector, changes to Standards and Regulations and relevant industry news.



Industry Safety Outcomes

Building and Energy ensures the safety of electricity and gas workers by setting and enforcing minimum prescribed technical safety requirements for electrical and gas work.

Our industry development activities include ensuring:

- technical standards adequately address trends in industry;
- industry are adequately informed about changes to standards and legislation;
- learnings from our investigations are shared with industry; and
- appropriate enforcement actions are undertaken, depending on the severity of the breaches of legislation found, to change behaviour.

During 2020–21, the following industry safety outcomes were realised:



90%

Electrical installations inspected found to comply with legislation



4,900

Inspectors' Orders and Notices of Defect issued



78%

Gas installations inspected found to comply with legislation

Electrical industry safety

Electrical workers are at greater risk of electric shocks and electrocution than members of the general public or workers in other occupations.

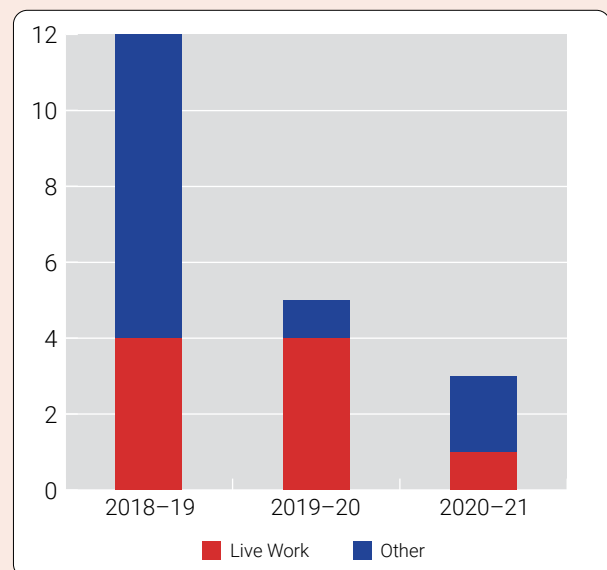
In 2020–21, there were three (3) fatalities and serious incidents involving electrical workers in Western Australia.

While the number of incidents have decreased, compared to 2019–20 and 2018–19, which saw five (5) and twelve (12) fatalities and serious incidents involving electrical workers respectively, this number is still too high since all these incidents were avoidable.

Since the Electricity (Licensing) Regulations 1991 were amended to prohibit work on energised equipment, the number of serious incidents involving energised electrical equipment have decreased but there were still instances where electrical workers failed to abide by safe work practices and the law during 2020–21.

Similarly, while incidences of serious accidents involving electricity in the roof spaces of domestic dwellings have decreased, there was one serious accident in 2020–21 that could have been avoided had the main power been switched off prior to work being undertaken in the roof space.

Electrical worker fatalities and serious accidents



Gas industry safety

There were no fatalities or serious incidents in the past 12 months involving gas workers. This, however, does not alter the ongoing focus to improve the knowledge and skills of the industry and its workers by sharing learnings from incidents both in Western Australia and other jurisdictions.

Building and Energy is conscious that the rapid development in the hydrogen space will present new challenges to industry. A number of initiatives are included in this Business Plan to support the greater role of hydrogen in the future.

Industry Safety Initiatives

Setting technical safety standards for industry

Building and Energy works closely with other technical safety regulators across Australia, such as the Electrical Regulatory Authorities Council (ERAC) and the Gas Technical Regulators Committee (GTRC), to continually improve safety and technical standards.

By participating in relevant Standards Committees, along with other regulators and industry we facilitate ongoing safety improvements applicable to energy installations, equipment, appliances and networks to protect industry and the community. We are represented on the following electricity and gas Standards Committees:



Electricity:

- EL-001 Wiring Rules (Standards Australia)
- EL-043 High Voltage Installations (Standards Australia)
- EL-052 Electrical Energy Networks, Construction and Operation (Standards Australia)
- EL-062 Smart Grids (Standards Australia)

Gas:

- AG-001 Gas Appliances (Standards Australia)
- AG-006 Gas Installation (Standards Australia)
- AG-008 Gas Distribution (Standards Australia)
- AG-010 Natural Gas Quality Specifications (Standards Australia)
- AG-011 Industrial and Commercial Gas-Fired Appliances (Standards Australia)

Code	Name	Description	2023 Target Completion
IS1	Industry awareness campaigns	Electrical and gas proactive industry engagement including annual gas and electrical inspector forums, TAFE and industry briefings, and publication of safety alerts and newsletters.	Ongoing
IS2	Compliance campaigns	Proactive site visits to enforce supervision requirements, especially for apprentices. Remote communities will be supported during the year with a number of dedicated inspection and engagement campaigns.	Ongoing
IS3	Electrical and gas worker competency improvement	Investigation into the merit of CPD requirements for electrical and gas workers.	Ongoing



Network Safety Achievements

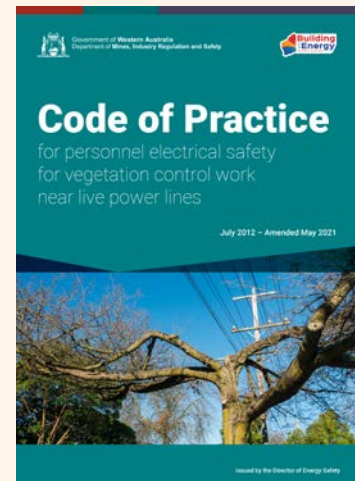
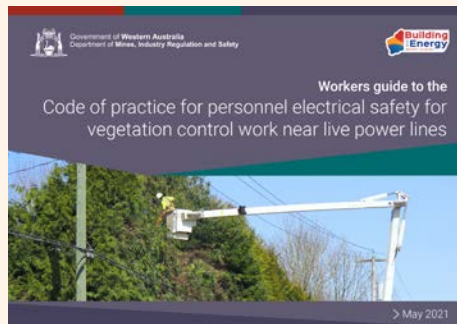
Amendments to the Electricity (Network Safety) Regulations 2015

Several amendments were made to the legislation to address weaknesses with some definitions, offences and ancillary provisions which were causing uncertainty with regard to the scope of network operator obligations and the Director of Energy Safety's ability to prosecute for apparent failures under the legislation. The amendments also included expansion of the scope of the Electricity (Network Safety) Regulations 2015 to capture new supply arrangements, such as 'stand-alone power systems', which are being rolled out by network operators.

Management of vegetation near overhead power lines

Vegetation that gets too close to power lines is a safety risk. It can cause electrocution, fires, bushfires and can affect the reliability of electricity supply. The Director of Energy Safety has published a Code of Practice which prescribes the principles applicable to safe vegetation management for work near live overhead lines.

It also published a Workers' guide to the Code. The Guide was developed to assist industry and provides simplified explanations for various aspects of the Code. An assessment can be completed online, with a certificate of achievement issued when the assessment is passed.



High-voltage live line work and testing of HV line equipment

The Director of Energy Safety issued an Inspector's Order to all service providers undertaking high-voltage live line work and testing of HV line equipment in April 2021. This followed an investigation into an incident which found deficiencies in processes and equipment used for live line washing. The Order prescribed the minimum technical standards for such work.



Network Safety Outcomes and Initiatives

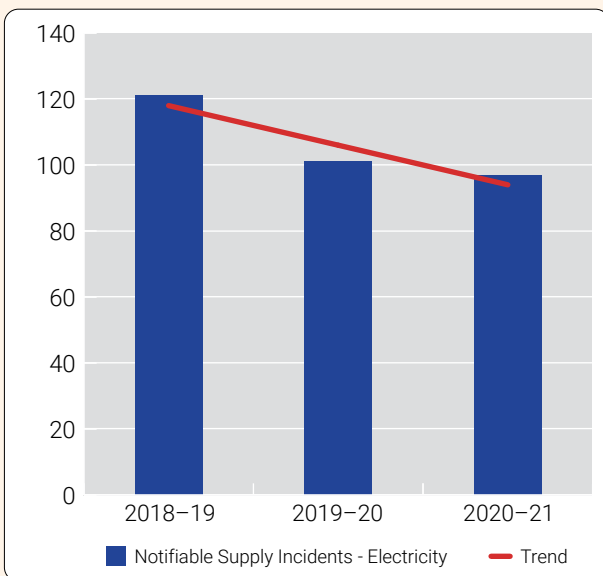
Building and Energy actively monitors network safety incidents and gauges the effectiveness of network operators' asset management strategies. We also undertake investigations into 'notifiable incidents' reported by the electricity and gas network operators and suppliers.



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Investigations of network operators' incidents during 2020–21

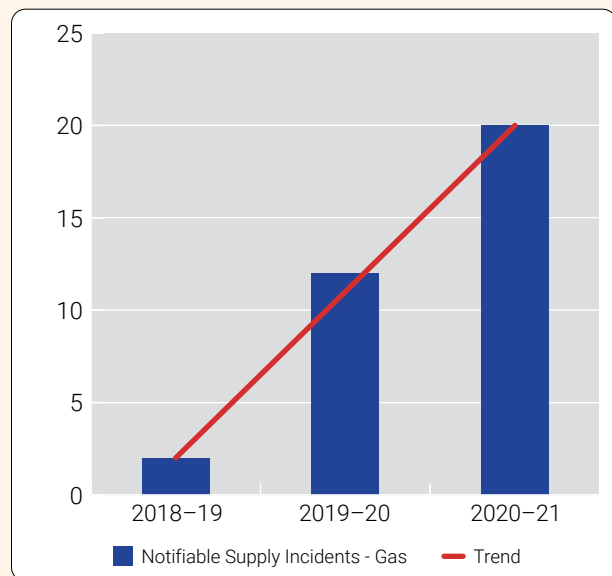
Number of notifiable electricity network incidents reported



Under the Electricity Network Safety Regulations 2015, electricity network operators are required to notify the Director of Energy Safety of all notifiable incidents which occur on their respective networks. Building and Energy undertakes investigations into these incidents. A review of the trends of notifiable incidents over the past three years indicates a downward trend.

Electricity network operators are also required to publish their respective Network Safety Performance quarterly. A general downward trend is evident in the number of pole fires, unassisted power pole failures, streetlight pole failures, conductor and stay wire failures in the South West Interconnected System (SWIS), North West Interconnected System (NWIS) and Horizon Power networks.

Number of notifiable gas network incidents reported

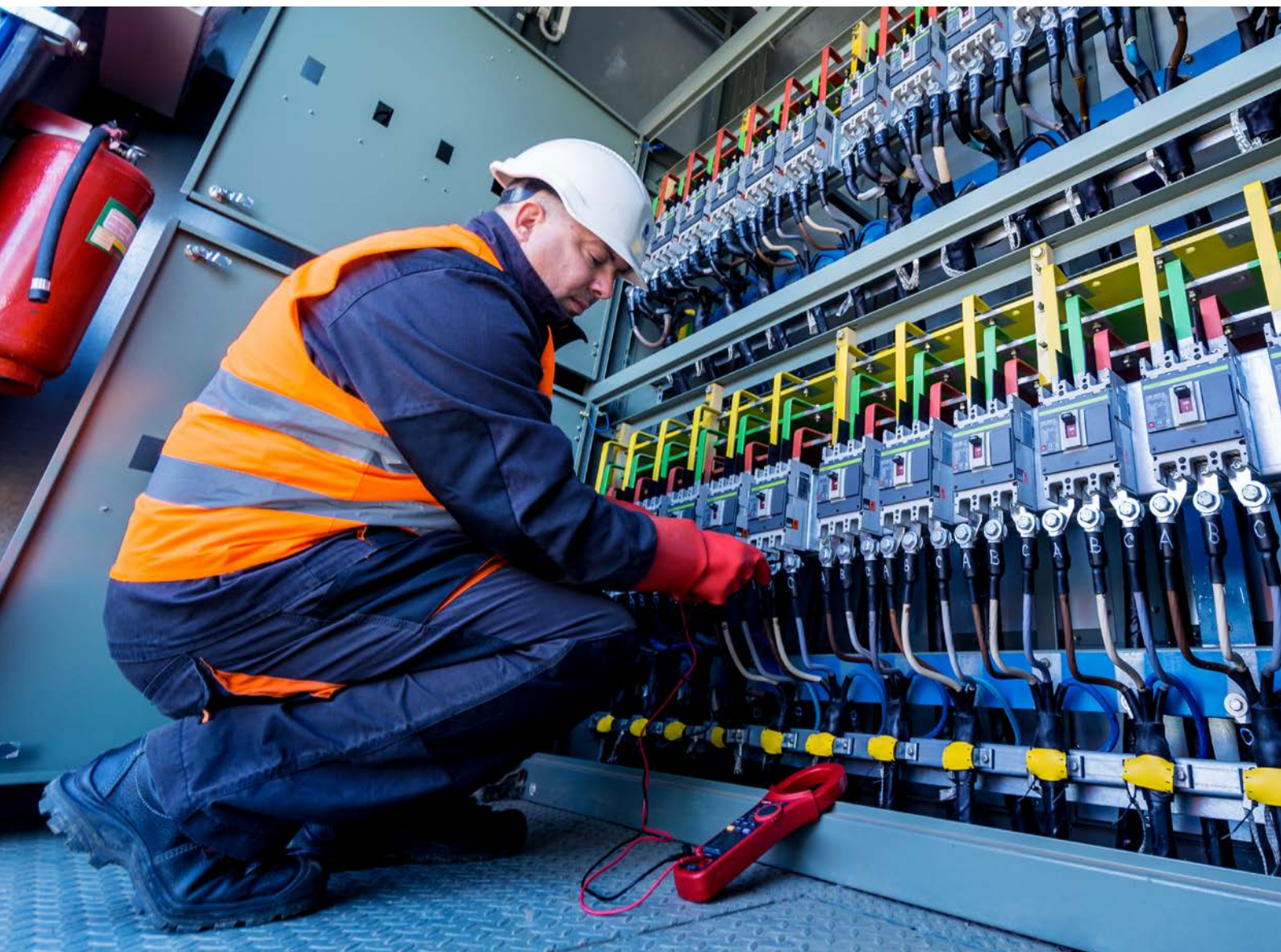


The number of notifiable incidents on gas networks saw an upward trend over the past three years.

The majority of these incidents were caused by third party strikes, resulting from contact with gas pipelines and network assets during excavation work or work in the vicinity of gas network assets. While these incidents caused loss of supply to consumers, main breaks and gas release and, on some occasions fires, we were fortunate that none of them resulted in injury or fatality.

Building and Energy will continue to work with network operators to raise consumer and industry awareness about Dial Before You Dig and other controls in place to mitigate such risks.

Code	Name	Description	2023 Target Completion
NS1	Audit of Electricity Network Operator's Compliance	Audit of one electricity Network Operator's Electrical Network Safety Management System (ENSMS).	✓
NS2	Gas Regulation Improvements	Amendments to Gas Standards (Gas Supply and System Safety) Regulations 2000.	✓
NS3	Audit of Gas Network Operator's Compliance	Audit of one gas Network Operator's Safety Case.	✓
NS4	Hydrogen blending in natural gas	Support for the increased proportion of hydrogen in natural gas distribution network including: <ul style="list-style-type: none"> • Changes to Regulations and Codes of Practice. • Amendments to Standards. • Education of Industry and Consumers. 	Ongoing



2022–23 Financial Plan

The following Financial Plan presents the energy safety associated expenditure and revenue budget forecasts of Building and Energy (both capital and operating), for 2022–23 and three out-years.

It also includes a comparison between the budget and actual out-turn for 2020–21 as well as the approved budget for the current (2021–22) financial year.

The 2022–23 Financial Plan presents the full costs and revenues of Building and Energy that are attributable to energy safety functions, to ensure:

- consistency and alignment with presentation of the State Budget;
- consistency and alignment with the internal budget of DMIRS;
- consistency between budget estimates and reporting of actual results, resulting in strong financial management information to assist decision-making and planning;
- the impact of non-cash costs and any cost-escalation factors are understood;
- decisions about revenue sources (i.e. industry levy levels and reviews of tariffs, fees and charges) are made in view of full cost expectations;
- accurate income estimates are made for some licence types that can be paid/renewed over various periods (either one year, three years or five years); and
- the full cost of delivery of the energy safety related operations and functions of Building and Energy, which includes recognition that non-cash expenses, such as depreciation and leave liability expenses, are met by revenue from the industry funding model and licensing activity.

While the budget estimates are presented on a full accrual basis, the cash impact is also shown, including cash reserve estimates.

The Financial Plan provides details of:

- planned operating expenditure, including non-cash expenses such as depreciation and leave liability movement;
- planned capital expenditure;
- estimated revenue from electrical and gas licensing activities and other minor revenue-generating activities; and
- the energy industry levy required to make up the shortfall between expenses and revenues.

Estimates are provided for 2022–23 and the subsequent three years. By their nature, projections for the subsequent years are less accurate and are subject to review prior to each year.

Expenditure estimates have been escalated based on known incremental factors (such as salary increments that are established in Awards and State Wage Policy) or on an average at a rate commensurate with the expected rate of the Consumer Price Index (CPI).

Licensing revenue projections have been based on licensing activity growth or decline, and take into account the expected effect of the economic climate on prospective numbers of licensing applications and renewals. Licensing revenues have also been escalated in subsequent years where appropriate by a rate commensurate with expected CPI levels.

Building and Energy reported against an FTE cap until 2020–21. Since Building and Energy was formed in 2018, there has been a stronger emphasis on performance against salary expenditure limit, rather than the number of FTE. In line with this change, the FTE figures have been excluded from this year's financial plan.

In 2018–19, the energy industry levy was set at \$7.2 million and has remained unchanged until 2021–22, despite there being CPI increases during that time. If actual CPI was applied during 2019–20 and 2020–21 and projected CPI was applied for 2021–22 and 2022–23, the levy would have been set at \$7.9 million for 2022–23, being a nine per cent increase as compared to the current levy.

Building and Energy is working on a range of activities to support and facilitate the government's broader initiatives in the energy sector. This includes a review of the legislative framework to ensure it can adapt to emerging technologies and new trends in the sector including the emergence of battery energy storage systems, standalone power systems and several initiatives to promote the use of renewable hydrogen. Building and Energy's compliance activities will also have to adapt to changes in the sector and it will have

to be adequately resourced to do so. This is reflected in the expenditure forecast for 2022–23. It is proposed that the levy be increased by five per cent to \$7.6 million for 2022–23 and continues to increase by CPI each year thereafter to fund Building and Energy's activities in an evolving energy sector.

Although cash reserves held in the Special Purpose Energy Safety Account remained high to the end of 2020–21 (for the reasons detailed at Note 4), the level of cash reserves required to remain at an optimal level is between \$11 million to \$13 million. This is to ensure that sufficient funds would be available to cover the leave liability as it falls due, income received in advance, accumulated depreciation to replace assets as they come to the end of their useful lives, unplanned extraordinary expenses associated with major investigations (such as large electricity-caused bushfires) and to provide sufficient funding for energy related operations for at least a quarter should it encounter funding collection challenges.

The 2022–23 Financial Plan has been set to continue to be sustainable with cash reserves that reflect self-sufficiency and flexibility over the forward estimates period, while ensuring an appropriate level of cash is maintained, albeit lower than the optimal level in the out years.

As has been identified over many years, the most significant risks to the budget are from factors outside of Building and Energy's control that will impact licensing activity. Electrical and gas licence volumes grew at a significant rate for approximately 10 years up until early 2016, reflecting the resources boom experienced during that time in Western Australia. A significant number of electrical licences were issued to persons with an interstate address. It has been noted for the past several years that, should the resources sector slow-down affect licensing activity, without another trades-related sector experiencing significant growth, revenues from electrical and gas licensing activity may decline over several years.

In March 2020, the State Government announced a COVID-19 coronavirus economic and health relief package, providing a discount on licensing fees for the 12 month period between 1 April 2020 to 31 March 2021 to assist small and medium-sized businesses. This resulted in a decline in the licensing revenue earned in 2020–21, which was partially offset by Government appropriations, which were paid to the Energy Safety Account to compensate for the revenue losses.

This has not significantly impacted Building and Energy's financial position. There has been a slight slow-down in the long-term rate of growth that had been experienced over previous periods. Should this decline become more significant and have a more material impact on revenue forecasts, decisions concerning either the functions of Building and Energy, further commensurate increases to the industry levy, or increases to licensing fees above CPI in order to bring them closer to full cost recovery rates will need to be considered.

The financial plan has been prepared consistent with financial reporting requirements and with internal DMIRS budgeting processes.

The current year (2021–22) budget estimates reflect the budget approved by the Minister for the year in the 2021–22 Business Plan.

The Minister's approval of this Business Plan is accepted as approval for the 2022–23 budget as indicated.



2022–23 Financial Plan

Financial Year	2020–21 Budget	2020–21 Actual	2021–22 Approved Budget	Escalated \$			
				2022–23	2023–24	2024–25	2025–26
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Expenses							
1. Recurrent Expenditure							
a) Employee benefits expense	7,806	7,288	7,861	9,095	9,264	9,357	9,450
b) Corporate service charges	3,376	3,396	2,814	3,727	3,792	3,859	3,926
c) Licensing services charges	885	371	900	656	667	679	691
d) Depreciation expense	626	450	400	466	420	420	420
e) Legal services	198	330	373	342	348	354	360
f) Accommodation expenses	904	1,138	1,214	1,178	1,199	1,220	1,241
g) IS support/maintenance (CMS)	196	334	201	208	212	216	219
h) IT and minor equipment replacement	43	9	44	46	47	48	48
i) Other recurrent expenses	2,682	2,174	3,390	3,449	3,509	3,571	3,633
Total Recurrent	16,716	15,490	17,197	19,167	19,458	19,724	19,988
2. Capital Expenditure							
a) Software replacements (CMS)							
b) CMS project management	250	130	267				
c) On-line compliance and customer interface functionality							
Total Capital	250	130	267	0	0	0	0
Total Expenses	16,966	15,620	17,464	19,167	19,458	19,724	19,988
3. Income							
a) Industry Levy	7,225	7,225	7,225	7,586	7,738	7,893	8,051
b) Licensing Fees	8,012	4,390	7,701	8,256	8,401	8,548	8,698
c) Indian Ocean Territories	47	0	48	48	49	50	52
d) Other revenues	52	1,841	53	10	10	11	11
Total Income	15,336	13,456	15,027	15,900	16,198	16,502	16,812
Surplus/(Deficit) for the period	(1,630)	(2,164)	(2,437)	(3,267)	(3,260)	(3,222)	(3,176)

Cash Balances

On a cash basis the above budget is reflected as:

Financial Year	2020–21 Budget	2020–21 Actual	2021–22 Approved Budget	Escalated \$			
				2022–23	2023–24	2024–25	2025–26
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Estimated Opening Balance	15,832	14,967	14,963	12,975	11,124	9,229	9,229
Industry Levy	7,225	7,225	7,225	7,586	7,738	7,893	8,051
Licensing Fees	8,362	5,325	8,051	8,556	8,696	8,798	8,918
All other revenues	99	1,841	101	58	59	61	62
Cash expenses	(15,690)	(15,346)	(16,414)	(18,051)	(18,388)	(18,654)	(18,918)
Cash movement	(4)	(955)	(1,037)	(1,851)	(1,895)	(1,902)	(1,887)
Estimated Closing Balance	15,828	14,012	13,926	11,124	9,229	7,327	7,342

Notes and explanations

Note 1: Recurrent expenditure

- a) Employee benefits expense: includes all expenditure associated with Building and Energy's permanent, contract and temporary employees, known salary increases under awards and direct on-costs such as leave entitlements and other employee entitlements.
- b) Corporate service charges: Building and Energy relies on central DMIRS Corporate Services support (covering finance, HR and IT support) to be provided by DMIRS. The amounts shown are the estimated costs provided by the DMIRS Corporate Services Division, including employee benefits costs for Corporate Services support employees.
- c) Licensing services charges: Building and Energy relies on licensing processing services to be delivered by the DMIRS Licensing Services Directorate, with which a Service Level Agreement is in place. The amounts shown are the estimated costs provided by the DMIRS Licensing Services Directorate, including employee benefits costs for Licensing Services employees.
- d) Depreciation expense: covers the cost of depreciation of Building and Energy's assets, including software systems. The bulk of the depreciation expense relates to the Compliance Management System, which was commissioned during 2014–15 and which has a significant impact on depreciation expense from 2016–17 onwards.
- e) Legal services: these services have previously been primarily provided by the State Solicitor's Office, however, some legal services are now provided across DMIRS by an in house legal team with an allocation of costs for work related to Energy Safety, including employee benefits costs for Legal Services employees.
- f) Accommodation expenses: covers expenses relating to Building and Energy's office accommodation, including lease costs, maintenance and minor works, cleaning and utility costs.
- g) Information Services (IS) support and maintenance, Compliance Management System (CMS): includes recurrent costs associated with support, licensing and maintenance of CMS.
- h) Information technology (IT) and minor equipment replacement: covers routine replacement of desktop personal computers, local printers and related equipment. This has previously been included as part of the capital budget, but minor equipment costing less than the capitalisation threshold is expensed as costs are incurred during the year. This item includes the cost of mobile computing technology used in conjunction with CMS in supporting inspectors undertaking field work.
- i) Other recurrent expenses: includes all insurance costs, superannuation, communications services, safety awareness campaigns, travel, training, printing, management and maintenance of a vehicle fleet, technical services, recruitment, taxation expenses, various consumables and other services necessary for operating an office. Building & Energy will conduct major safety awareness and education campaigns in 2022–23, as detailed in the Business Plan.

Note 2: Capital expenditure

- a) CMS Software replacement reflects the capital costs of completing identified software enhancements.
- b) CMS project management reflects the capitalised internal IS project support costs for implementation of the CMS system enhancements.
- c) On-line compliance and customer interface functionality: works on enhancements to CMS or other systems to improve online compliance and customer interface.

Note 3: Income

- a) Industry levy: This is the energy industry levy necessary to ensure the Director's energy safety operations are fully funded to carry out legislated functions.

The levy is the amount needed to make up the difference between expected expenditure and the sum of the revenues of (b), (c) and (d) below for all four years of the forecast.

- b) Licensing fees: are derived from electrical worker, electrical contractor, and gas fitter licence fees. The total revenue per year fluctuates over a five year cyclical basis, as the electrical worker fees are for a five year term and renewals are not equally distributed over the period.

The licensing fee revenue is presented on an accrual basis. For 2020–21 this is \$4.4 million. On a cash basis the amount is \$5.9 million. There was a decline in the licensing revenue earned in 2020–21 due to the Government's COVID-19 relief package. For this reason, forecasted licensing revenue for 2022–23 is estimated based on 2021–22 revenue received in July and August 2021.

- c) Indian Ocean Territories (IOT): DMIRS has a service agreement with the Commonwealth’s Department of Infrastructure, Transport, Cities and Regional Development (DITCARD) to supply regulatory services to the IOT similar to those it provides on the WA mainland, but at full cost to DITCARD. Building and Energy provides electricity and gas regulatory services under this agreement and the expected reimbursement is shown.
- d) Other revenues: This reflects income from the sale of publications to industry and other minor recoups. In 2020–21, Government appropriations of \$1.8 million were received to compensate for the licensing fee revenue losses related to the COVID-19 relief package.

Note 4: Cash Balances

Cash balances form part of the DMIRS bank account and are classified as restricted cash. The cash at bank balance was \$14 million at the end of 2020–21.

The current restricted cash balance remains above the targeted cash balance due to:

- historical underestimates of revenues;
- the underspend of the budget, mainly due to the long-term inability to recruit required staff resulting in continuing vacancies and the subsequent inability to complete projects; and
- licensing income received in advance.

It is considered prudent financial management to aim for a closing cash balance at the end of each budget period sufficient to cover potential cash costs (liabilities) where non-current expenses have been recognised. For example, leave liability growth is included in Employee Benefits Expenses and this expense is covered by the industry levy. Cash balances should therefore be sufficient to cover the cash value of the leave liability. The leave liability value recognised is \$2.2 million as at 30 June 2021.

Additionally, it is prudent to allow for fluctuations in revenues across years and/or potential non-receipt of quarterly levy payments, and to provide some level of assurance should there be large unplanned expenditure associated with one or more major investigations. It is considered that \$1 million is a reasonable amount to be held for this purpose.

Depreciation and amortisation of Building and Energy’s assets is recognised as an expense each year, in line with normal accounting practice. The depreciation accumulates in recognition that it provides a source of funds to replace the asset at the conclusion of its useful life. Accordingly, the value of accumulated depreciation and amortisation should be recognised and maintained as a cash-holding. The value of accumulated depreciation and amortisation is \$996,000 as at 30 June 2021.

The licence fees that are received for more than a single year (some for three years, some for five), represent accrued or unearned income that should not represent cash available for expenditure in the year it is received. The total amount (incorporating both current and non-current unearned income) in the Energy Safety Special Purpose Account at 30 June 2021 was \$7.9 million. This is recognised as unearned income and it is reasonable that the bank balance should hold this income as it is not earned until later years.

Based on these factors, the targeted cash balance that is considered reasonable at any given time should be between \$11 million and \$13 million. This Financial Plan will see a sustainable maintenance of cash reserves within the optimal target range for 2022–23. However, it is forecasted that the cash reserves will decrease to below this target in the out years, if the industry levy is only increased by CPI. Building and Energy will continue to monitor the cash position and will provide options to Government in future years should sustainability of the account become an issue.

Industry Levy

Industry Levy Statement

This Statement is produced in accordance with section 6(1) of the *Energy Safety Act 2006* (the Act).

The Act makes provision for the collection of a levy from energy industry participants. The levy is in accordance with section 6(1)(c) of the Act and the related *Energy Safety Levy Act 2006*. Similar contribution schemes operate for other Divisions of DMIRS and are levied on the gas and electrical industries in other jurisdictions.

For 2022–23, the proposed Energy Safety Industry Levy will be \$7.586 million. The Act allows the responsible Minister to determine the levy for the financial year, for notice of this to be published in the Gazette and for the Director of Energy Safety to issue notices of assessment accordingly. All revenue raised from the levy will be used solely for energy safety-related activities.

As required by the governing legislation, this section of the Business Plan details the methodology for the calculation and allocation of the appropriate portions of the levy to individual industry participants.

Industry Levy Quantum

It is required that the levy be applied at a level sufficient to enable the full costs of energy safety operations to be met. Accordingly, a levy of \$7.586 million is proposed in this Business Plan for 2022–23.

This enables sufficient funds for the full structure of Building and Energy's energy safety related operations, meet the costs of its liabilities and support and facilitate the Government's broader initiatives in a changing energy sector. This includes a review of the legislative framework to ensure it can adapt to emerging technologies and new trends in the sector including the emergence of battery energy storage systems, standalone power systems and several initiatives to promote the use of renewable hydrogen.

The proposed levy for 2022–23 represents an increase of five per cent from 2021–22 and as explained in the financial plan, reflects estimated costs and other revenue sources related to energy safety functions for Building and Energy and also considers the optimal cash holding level.

It is recognised that Building and Energy is unlikely to have a full staffing contingent at all times during any given financial year. Historical vacancy rates, coupled with improved recruitment successes in recent years gives reasonable confidence that the vacancy rates will fall and remain relatively low and steady through 2022–23 and beyond, and surplus funds will not be realised from under-expenditure at the same levels as has been experienced in prior years.

Apportionment of Levy between energy sectors

The proposed 2022–23 industry levy of \$7.586 million will be apportioned as 67 per cent to the electrical industry and 33 per cent to the gas industry in accordance with section 6(2) of the Act.

Therefore, the total levy contribution to be received from participants in the electrical industry will be \$5.083 million, and from participants in the gas industry it will be \$2.503 million.

Method for allocation of Levy within energy sectors

To allocate the levy within each industry sector, the Director will continue to use the model devised for the allocation of the 2006–07 levy after consultation with industry. The model is based on the following:

- a) Levy allocation across the gas sector to be based on the number of gas consumer sites supplied by each gas distribution system licence holder and LP gas distributor supplying LP gas in bulk and in portable 45kg cylinders in WA, subject to a minimum aggregate total of 500 sites. The aggregate may be based on multiple networks.
- a) Levy allocation across the electricity sector to be based on the aggregate number of consumer sites served by each network operator subject to a minimum aggregate total of 500 sites. The aggregate may be based on multiple networks.

In mid-2021, the Director wrote to all participants in both energy sectors requiring them to confirm, in accordance with regulation 4(5) of the Energy Safety Regulations 2006, the number of LP gas and consumer sites connected. Responses were received from all participants.

Based on the information received, the proportion of all consumers supplied by each supplier within both industry sectors was established. This proportion was then used to calculate the annual levy contribution payable by each participant.

A similar survey will be carried out in mid-2022, determining the levy contribution allocations for each supplier for 2022–23.

Administration of the Levy Scheme

A confidential database is maintained of industry site or operator-specific information that provides an audit trail in support of the levy calculations for each participant.

In 2021–22, independent auditors were engaged to verify that the participants had robust systems and processes in place to support the customer numbers reported to the Director, so that the apportionment of the levy was undertaken on a reasonable basis. It is expected that this audit will be conducted every three years.

Although the total levy amount falls due for payment at the beginning of each financial year, industry participants will be invoiced quarterly, as in previous years.

The formal assessment for the year will be communicated to individual participants concurrently with an invoice for the first payment. In accordance with section 17(3) of the Act, if an instalment is not paid at or before the due date, the whole of the annual levy becomes due and payable immediately. There will be no reduction in liability as a result of departures from the industry during the year, or back-accounts for new participants to the industry during the year.



Appendix A – 2020–21 Safety Statistics

Building and Energy actively monitors trends of incidents to inform its risk-based compliance regime.

Every year it published statistical information about electricity and gas incidents which occurred during the previous financial year. These incidents are recorded in Building and Energy's Compliance Management System (CMS) as reported by industry and the general public.

A summary of the trends as of 1 July 2021 is provided in this appendix.

Electrical Safety Statistics

Electrical fatalities

There were two electricity related fatalities reported during 2020–21.

In one incident, an apprentice electrician entered the roof space of a domestic property and is suspected to have come into contact with live parts, associated with the properties 240 volt electrical installation.

The other incident involved an employee maintenance worker who attempted to make repairs to a fallen sign, located at the front of a resort. The sign contained electrical cabling associated with a 240 volt socket outlet. Damage sustained to the electrical cabling resulted in the metallic frame of the sign becoming live and it is suspected that the worker came into contact with the live metallic frame.

Chart A: Electricity related fatalities per million population

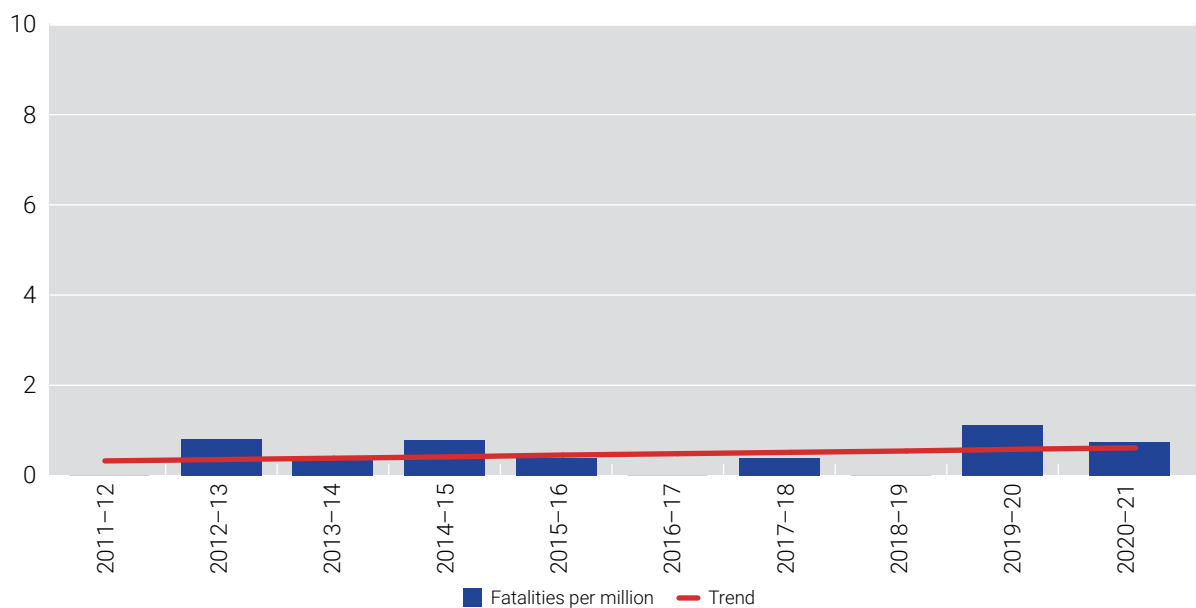
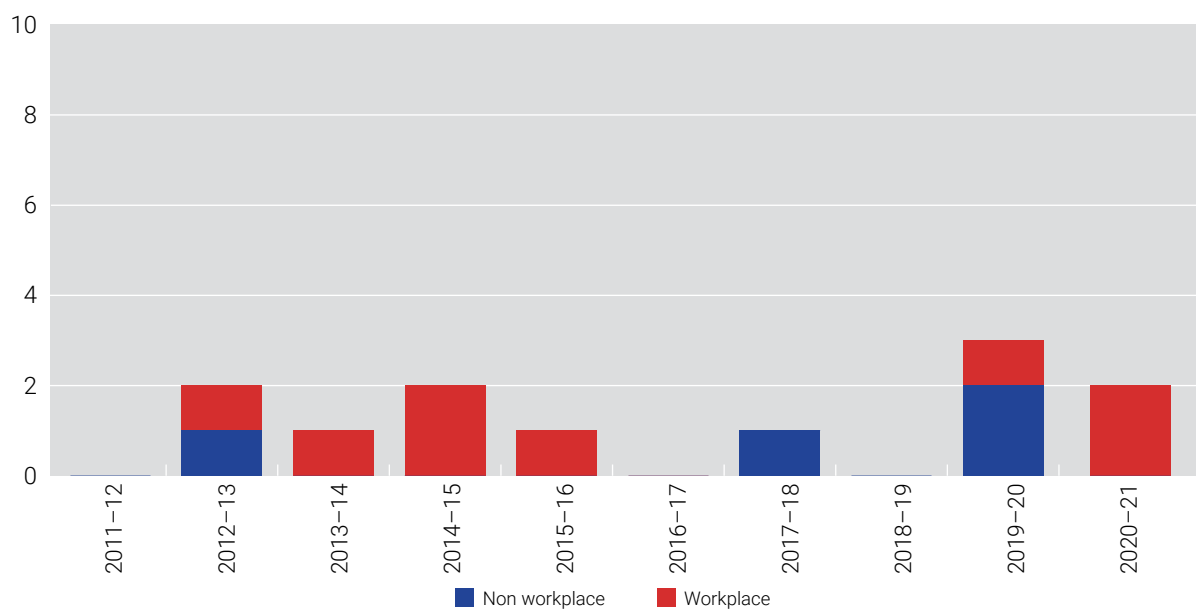


Chart B: Workplace and non-workplace electrical fatalities



Both fatalities reported in 2020–21, were incidents that occurred in the workplace. Of the two, one incident involved an electrical worker.

Over the ten year period from 2011–12, the incidents occurring in the workplace were double those occurring in the non-workplace.

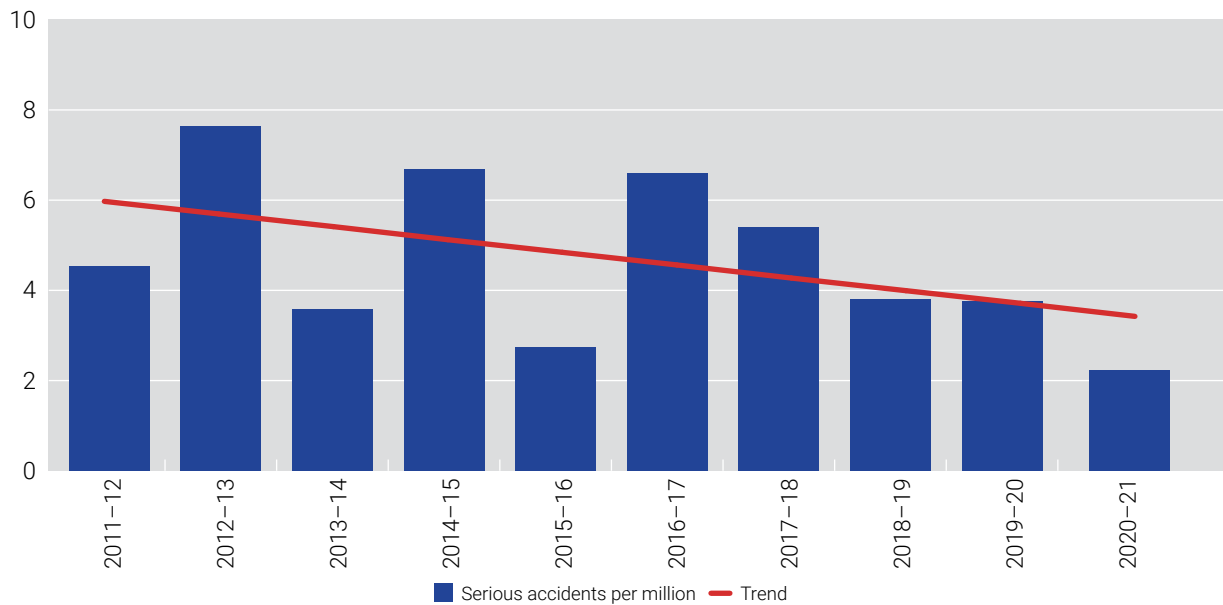
Electrical accidents – non-fatal

Accidents have been broadly classified into serious electrical accidents, which include incidents that require the victim to be hospitalised for treatment of injuries, and/or require medical treatment where first-aid or medical attention, excluding attendance for a precautionary electrocardiograph (ECG), is sufficient for the treatment of injuries sustained in the incident.

The number of electrical accidents (non-fatal) per million population in WA has shown a declining trend over the past 10 years (Chart C). During 2020–21, there were six (6) non-fatal accidents reported.

Several measures have been put in place to improve electrical safety outcomes that may have contributed to the decline in the number electrical accidents. These include, but are not limited to, the introduction of Residual Current Devices (RCDs), implementation of legislation preventing live work by electrical workers, a robust inspection regime, stringent appliance approval requirements and increased consumer and industry awareness through safety campaigns.

Chart C: Electrical accidents per million population



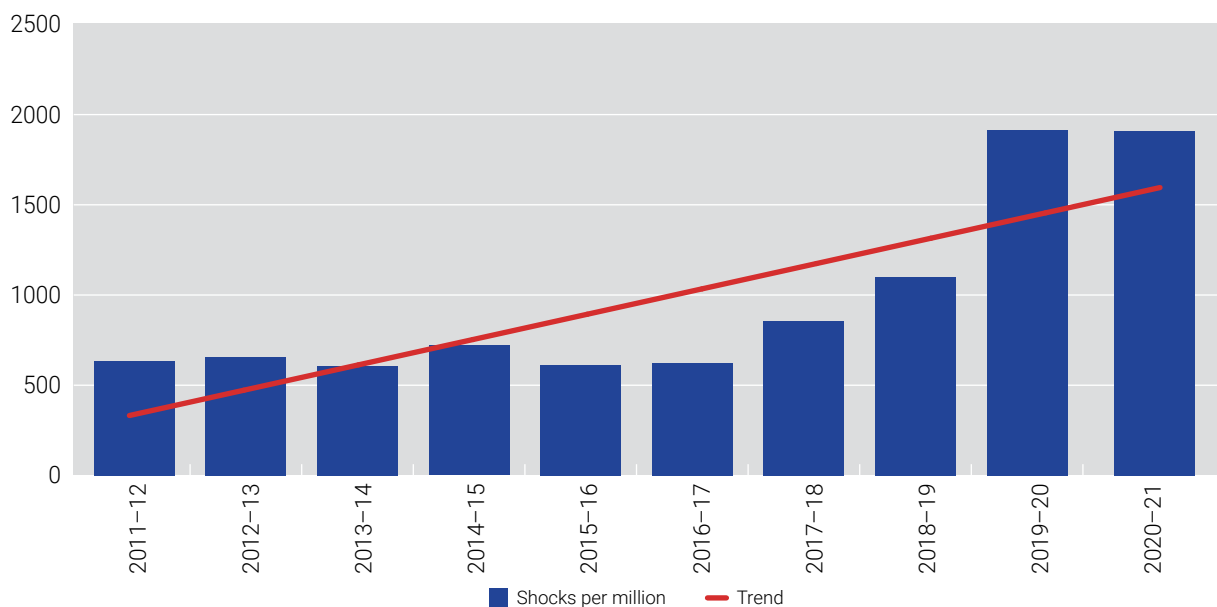
Electric shocks

An electric shock that does not cause injury or harm may be experienced due to an error by a person (e.g. contacting energised parts), faulty equipment in the home or workplace, or due to a fault or deficiency with the electricity supply network.

The number of reported shocks indicates an increasing trend over the ten year period. During 2019–20 there were 5,104 electric shocks reported compared with 5,129 in 2020–21.

The shocks and tingles advertising campaign conducted during 2019–20 has generally increased the awareness among the general public and industry, about the importance of reporting such incidents to network operators.

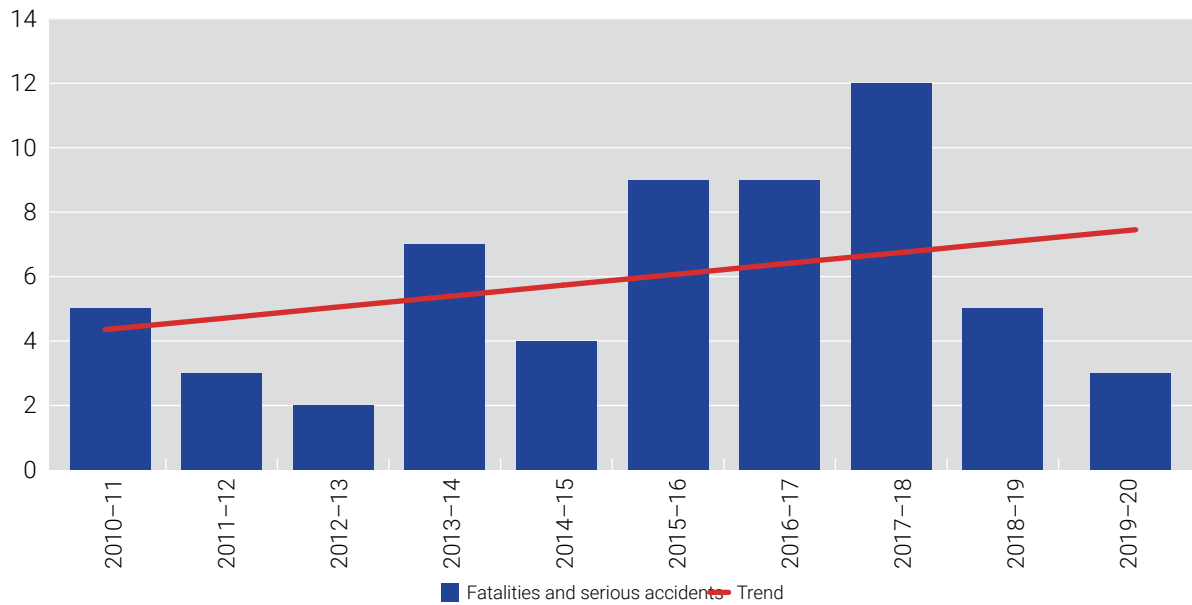
Chart D: Electrical shocks per million population



Electrical Worker Safety

Electrical workers are at greater risk of electric shocks and electrocution than members of the general public or workers in other occupations. Despite greater knowledge related to working with electricity, most of the incidents involving electricians result from performing tasks on energised electrical equipment.

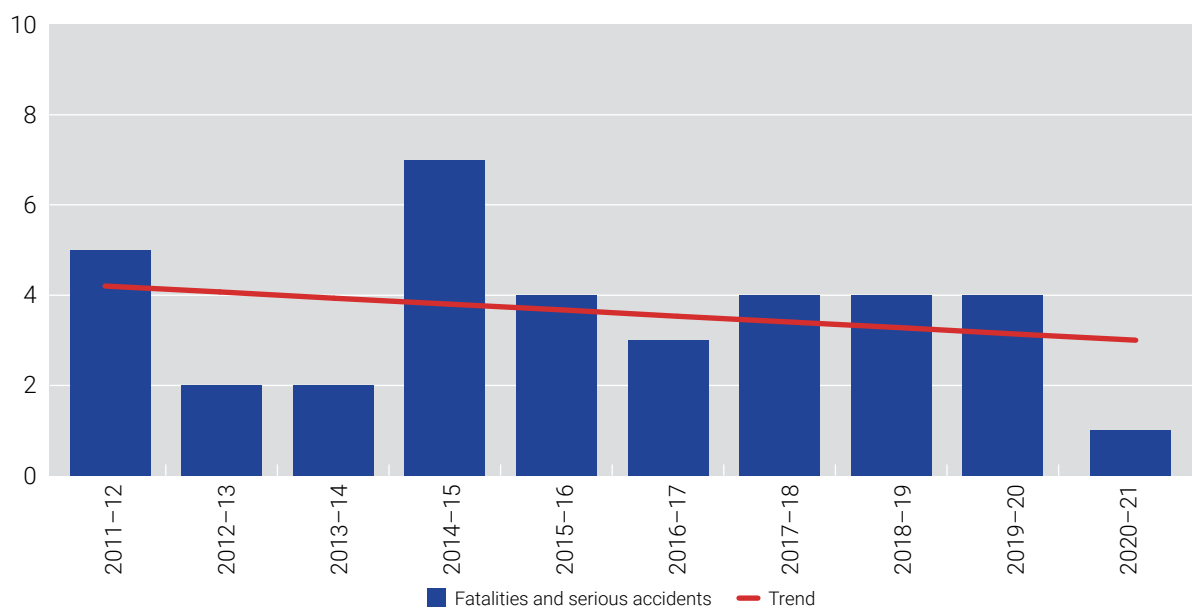
Chart E: Fatalities and serious accidents involving electrical workers in WA



In Chart F below, the trend of fatalities and serious accidents resulting from 'live' work involving electricians is declining.

In 2018, new legislation was introduced that prohibits electrical work to be performed on or near an exposed energised part of an electrical installation that can be de-energised. This was followed by an industry safety awareness campaign to educate industry on the dangers of working live and the related new legislation.

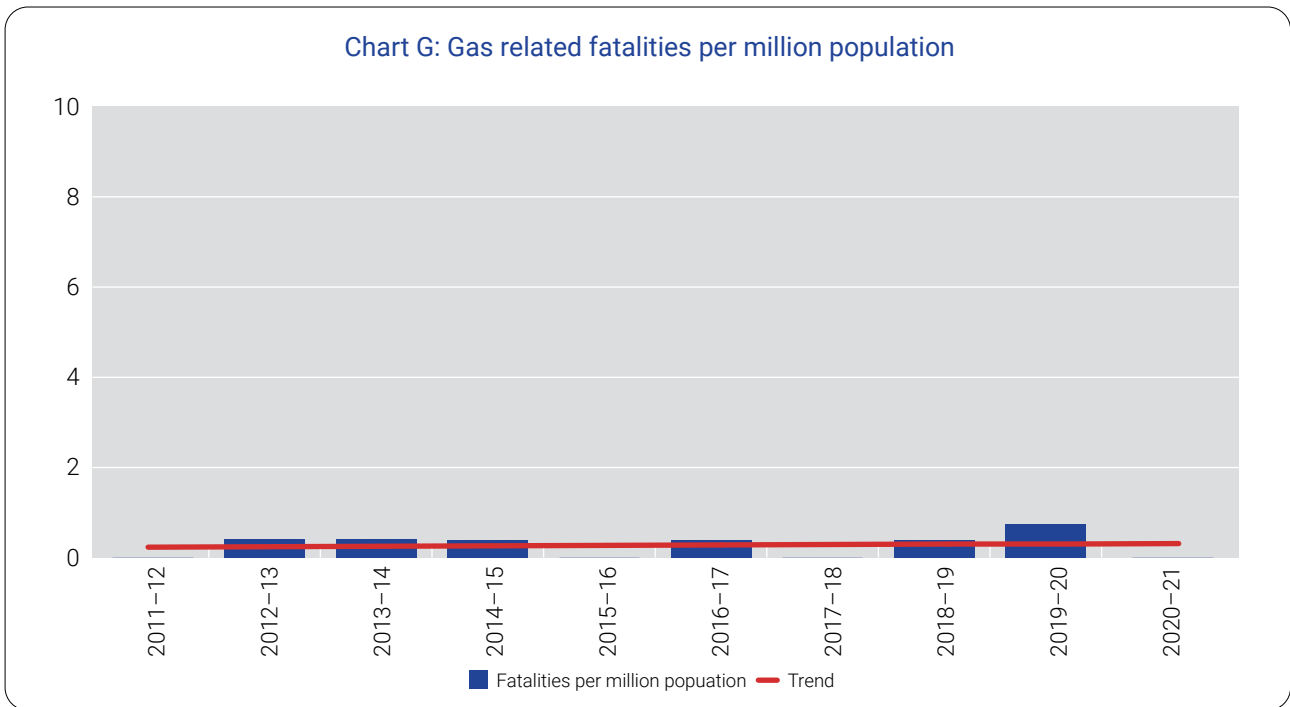
Chart F: Fatalities and serious accidents resulting from live work involving electricians in WA



Gas Safety Statistics

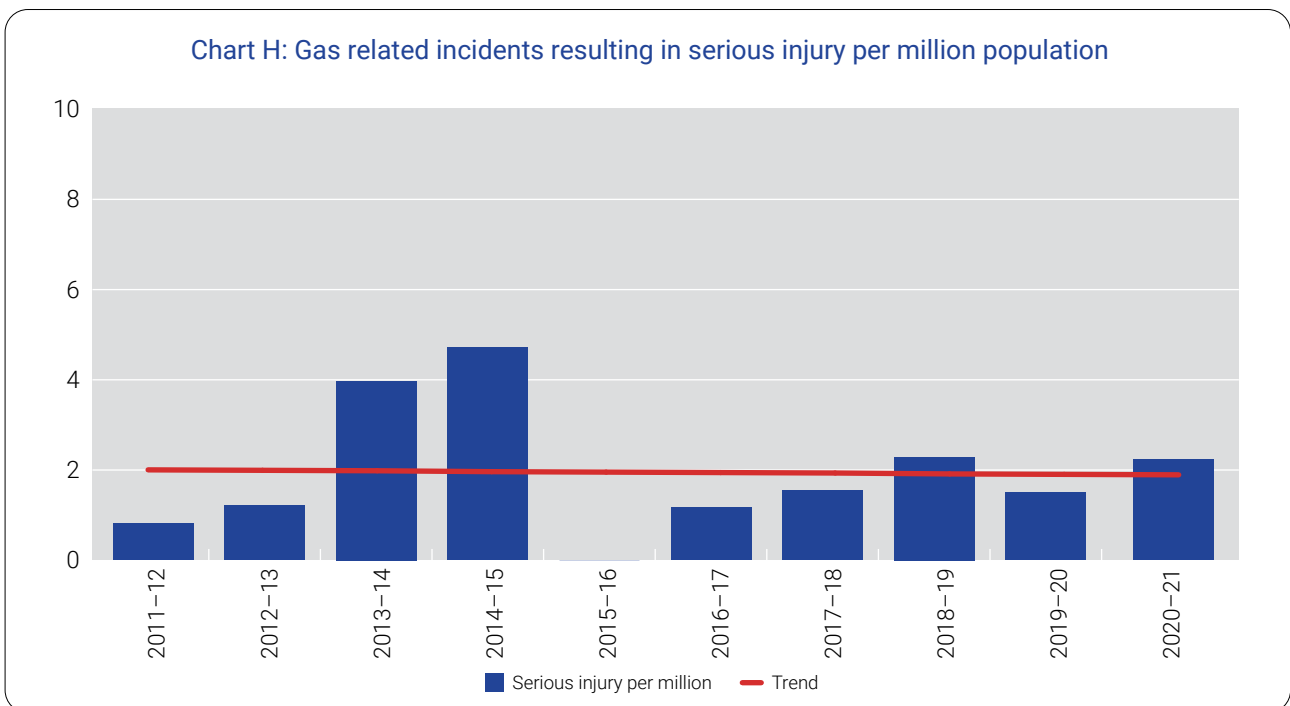
Gas fatalities

There were no gas related fatalities reported in 2020–21. The trend for gas fatalities indicates a very low number of such incidents.



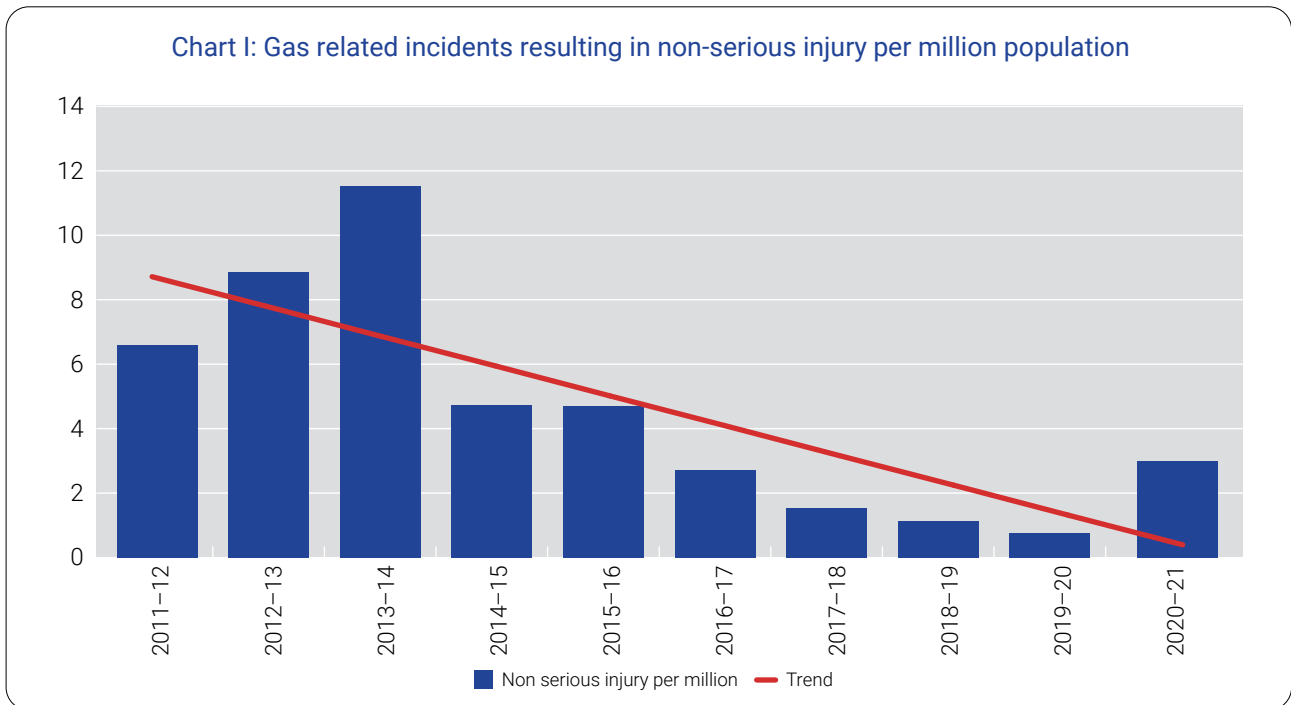
Gas accidents – serious injury

There were four reported serious accidents with six people injured in 2020–21. By the very nature of gas incidents, multiple people can be injured in a single incident. There were two such incidents that resulted in injuries to more than one person.



Gas accidents – non-serious injury

There were eight gas related incidents which resulted in minor injury in 2020–21 compared with two such incidents in 2019–20. The trend of such incidents indicates a decline over the ten years from 2011–12.

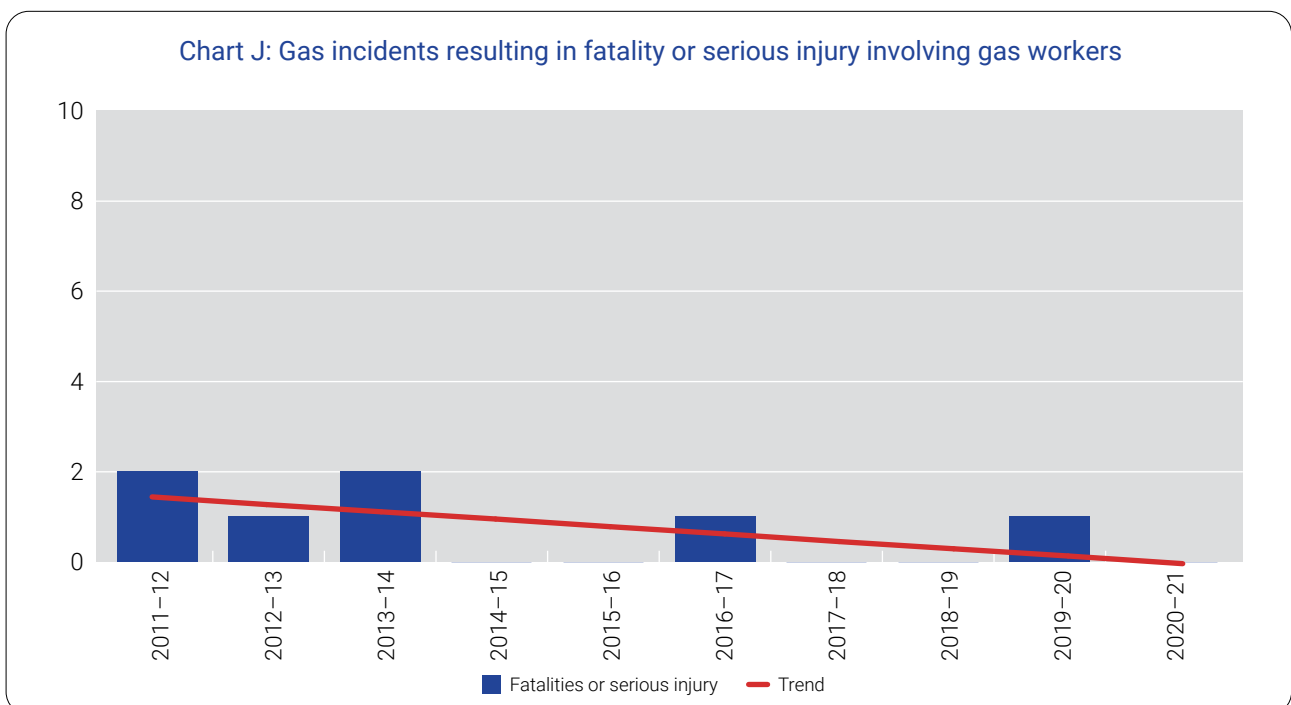


Gas worker safety

Safety outcomes in relation to fatalities and serious injury involving gas workers continues to be positive with a declining trend in such incidents.

There were no fatalities involving gas workers over the ten years from 2011–12. The incidents in the chart below relate only to serious accidents.

There were no fatalities or serious accidents involving gas workers in 2020–21.



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