Purpose

Safety is the number one value for Energy Queensland – safety for our employees, our customers and the community. This plan outlines how Energy Queensland, through its network distribution businesses Energex and Ergon Network, will invest and focus activities to build safety awareness, educate, and encourage behaviour change in the wider community and in high risk industry sectors throughout 2019-20.

Our Community Powerline Safety Plan is a publicly available document, which aims to:

• foster positive and proactive association of powerline safety within the community
• build community awareness of the dangers
• encourage education and behaviour change, and
• demonstrate our commitment to community safety.

We refer to ‘community safety’ to underline that the wider community has a part to play in powerline safety, as well as an obligation to understand and pass on this knowledge to others. Focusing on the word ‘community’ also acknowledges the connections within any community between workplaces, home and leisure and the far-reaching impacts of any electrical accident.

Changing attitudes starts with sharing information. Across Queensland, our employees work tirelessly to share safety messages and highlight the very real consequences of the wrong attitude to powerline safety. The potential for tragedy causes us great concern and drives us to continually improve the way we reach out to the community to help them stay safe.
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Research and incident data informs our plan

Analysis of electrical incident data forms the basis of this plan and determines the community and industry groups and regions of particular focus. Data of community incidents is analysed each month to determine the exact industry, activity, equipment type and location impacted.

Our data sources are primarily from:
- safety incidents logged by Energex, Ergon Network, the Electrical Safety Office and Workplace Health and Safety Queensland
- previous electricity safety initiatives in Queensland
- review of safety awareness research and collaboration with other electricity utilities.

It is anticipated over the next two years that community related incidents that are reported will significantly increase. This will be due in part to the application of regulatory reporting requirements and also improved internal awareness of what we need and want reported.

Data is analysed to understand key areas of exposure, both in terms of ‘at risk industries’, as well as ‘at risk assets’. Transparent reporting helps us understand what safety strategies work most effectively towards our ultimate aim to save lives and reduce injuries and hardship.

We balance data with a personal approach

While we rely heavily on data analysis, we support this with close personal interaction with our customers and communities. Conducting face to face presentations and participating in industry events allows us to interact closely with, and gain deeper insights into the mindsets of the community and industry groups. This personal, grassroots approach also provides the opportunity for one on one feedback on campaigns, approaches and materials.

Most importantly, our personal approach builds trust and credibility; increasing receptiveness to our safety messages.
Community Safety

Everyone uses electricity. When it is used safely and correctly, electricity enhances and enables our daily lives. It powers our homes, our workplaces, and our lifestyles. Electricity can also be dangerous in some situations.

Receiving a shock or tingle is a warning sign something is wrong. It is important to report these danger signs immediately and keep everyone clear of the danger to ensure our families and communities are kept safe.

Our community safety strategies are grouped into two distinct categories – community safety, which is relevant to everyone; and industry safety, which focuses on specific high risk industries.

Areas of most concern to the safety of the wider community are:

- storm and cyclone safety – looking out for fallen powerlines
- reporting shocks and tingles from water taps or appliances
- motor vehicle accidents that bring down powerlines
- children’s safety, and
- vegetation management.

1. Storm and cyclone safety

Both Energex and Ergon Network have a long history promoting the dangers of fallen powerlines during storms and cyclones, as well as how best to prepare for storm and cyclone season.

Our key messages and strategies this year include to:

- launch a new community safety campaign, ‘Take care. Stay line aware.’ which aims to increase awareness of the dangers of fallen powerlines during or after storms and cyclones. This includes television, radio, press, cinema and digital advertising.
- provide subject matter expertise to Queensland Emergency Services to enhance training packages and emergency response procedures
- extend our messaging around the dangers of fallen powerlines, encouraging the community to ‘treat all lines as live’, not only during storm season, but all year round
- placing stickers/warning labels on all Energex and Ergon owned mobile generation placed into the community during large outages
- increase public awareness to report all shocks and tingles ‘it is a sign that something is not right’
- continue to support major events like ‘Cyclone Sunday’ in Townsville and emergency service days across the state
- continue to promote the Ergon ‘outage finder’ map
- leverage our range of social media channels to promote our key messages during storm and cyclone season and during major weather events.
2. Motor vehicle accidents

Motor vehicle and heavy transport vehicle accidents cause the highest number of reported incidents and dangerous electrical events involving members of the community. We want to reduce potential secondary injuries and fatalities to both emergency services personnel and members of the public if they come across, or are involved in any type of vehicle accident that involves powerlines or pillar boxes.

To achieve this we will:

• refocus and simplify our key messages around what to do if you are involved in an accident that brings down powerlines – stay in the car, call for help, and wait for help to arrive
• refocus and simplify our key messages around what to do if you come across a vehicle accident that brings down powerlines – stay at least 10m from the vehicle, call for help, and wait for help to arrive
• launch a new range of community advertising under the ’Take care. Stay line aware.’ campaign focused on what to do in a vehicle accident that brings down powerlines, which includes television, radio, cinema and digital advertising year round
• target Queensland Government Department of Transport and Main Roads Customer Service Offices in an effort to have information distributed and displayed on ‘what to do’ in the event of an incident
• leverage social and local media when there are accidents, to reinforce our safety messages
• provide ‘train the trainer’ content and roll out an education campaign reinforcing the dangers to all emergency service staff.
3. Children’s safety

Keeping children safe around electricity is a key part of our commitment to community safety. Our Safety Heroes program is incorporated into the school science curriculum and helps teach primary school students how electricity works and how to behave safely around electrical equipment. The program is typically run during Electricity Safety Week in September each year. It’s been very successful with 95% of Queensland primary schools registering for the program in 2017.

Our employees are also keen advocates of the Safety Heroes program. During Electricity Safety Week 2018, 100 Energex and Ergon staff members visited schools to give a special safety talk which was well received by teachers.

Formal feedback by participants found that 99% of teachers believed Electricity Safety Week activities helped their students be safer around electricity, and pointed to strong examples of behavioural change in students.

To ensure the ongoing success of the program, teaching lessons and resource packs are updated each year.

Students are also encouraged to apply and demonstrate their learnings through competition activities. In 2018 we ran an online colouring competition for Prep – Year 3, and a video competition for students in Years 4-6 to demonstrate their understanding of safe behaviour around electricity.

Electricity Safety Week occurs in the second week of September and generates local media coverage to promote our key safety messages and encourage participation in the program.

“Students are now more aware of the potential danger of fallen powerlines, especially considering we are now entering storm season.”
Adrian from St John’s Lutheran School, Kingaroy

“By providing real life learning, the program helped the students to understand what electricity does and how dangerous it can be if not treated carefully. They are more aware of why things are off limits to them and how to stay safe in general.”
Lisa from Townsville Christian College

“The preps and juniors learnt about not using water around electricity and some had stories to share about how to be safe using electricity which was great.”
Carlotta from Ipswich West State School
4. Vegetation Management

Incidents involving vegetation interfering with powerlines often occur on private property in the lead up to cyclones and other severe weather events; when clearing new land with heavy equipment such as dozers and excavators; and in summer clearing for fire breaks.

We want to encourage people to clean up before storms to avoid vegetation bringing down powerlines. We also know customers seasonally clear gutters, trim trees, and on rural properties clear for fire breaks. However, we need to balance this with education about how to do this safely, and reminders to look out for service powerlines when working around the home, and other powerlines when working on rural properties.

To address these issues we will:

- include key messages targeted at home owners cleaning up their yard and gutters during spring and summer through our new 'Take care. Stay line aware.' campaign
- use hyper-local mobile advertising to target customers potentially buying clean up equipment in summer
- support and promote the re-introduction of historical programs such as Safer Trees and Plant Smart to educate community members about what trees to plant in the vicinity of powerlines
- access land clearing application processes to provide powerline safety messaging
- partner with AgForce and the Queensland Farmers Federation to distribute messaging through existing channels to members and attend relevant industry events
Industry safety

Industries and workers at highest risk

Energex and Ergon Network collectively operate an electricity network that consists of around:
- 1,660,000 power poles
- 210,000kms of powerlines, and
- 24,000kms of underground cables.

Accidental contact with these electrical assets is a major risk and, accordingly, a key area of focus for our safety efforts. Within our distribution area, data indicates the following industries and their workers are at the highest risk of accidental contact:
1. agriculture
2. building and construction
3. earthmoving
4. road transport
5. aviation.

While community safety is our overwhelming priority, contact with overhead or underground powerlines can also cause power outages, inconvenience other customers, and the damage caused often translates to increased costs for the organisation through increased lost customer time and repairs.

INCIDENTS BY INDUSTRY GROUP
Community electrical safety incidents are incidents that involve a member of the community contacting or damaging Energex or Ergon Network assets, e.g. vehicle/machinery impact.
Network assets and equipment at highest risk

The type of network equipment impacted by safety incidents provides an insight into the areas we need to focus our awareness and education activities.

The data shown below is a collation of all previous industry incidents for 2018 involving asset impacts. Overhead powerlines equate to more than 60 per cent of all reported impacts on Energex and Ergon Energy networks.

How will we address these risks?

The impact to overhead powerlines confirms a clear need to reinforce the ‘Look Up and Live’ message. We will:

• encourage changes to work practices and habits around overhead powerlines in high risk industries through our ongoing powerline safety advertising campaigns
• update our community advertising campaigns with the release of a new ‘TakeCare, Stay Line Aware’ campaign initiative, further supporting and extending the ‘Look up and Live’ messages
• Work with our asset management teams to identify the location of assets contacted and look at internal planning, design, construction, maintenance and operation procedures to encourage engineering solutions.
• Work with asset management to undertake a review of the pole, pillar box and stay wire locations and markers currently in use to determine if colour variations can be implemented in varying circumstances and locations

While we own and maintain our assets, any poles on private property that support overhead lines to homes, outbuildings or bores remain the responsibility of the property owner.

In the past 24 months there has been a significant increase in failures of privately owned poles, which can have a direct impact on our infrastructure and create a danger due to fallen service wires. To address this, we will:

• actively urge customers to inspect and maintain any privately-owned property power poles through the promotion of existing brochures at events and community safety presentations.
• reporting customer failed asset numbers quarterly to the ESO, Master Electricians Australia (MEA) and National Electrical and Communications Association (NECA) so they can engage the public and their members through existing communication channels on the importance of maintaining property poles.
Actions to address high risk industries

Committed partnerships

The level of incidents continues to be a concern that requires sustained, collective ownership and action. The need to negate the risks drives our partnerships with a diverse range of external organisations including:

- Workplace Health and Safety Queensland
- Electrical Safety Office
- Cotton Australia
- Local Government Association Qld
- Dial Before You Dig
- AgForce
- Queensland Trucking Association
- the Queensland Building and Construction Commission, and
- Aerial Applicators Association of Australia

We are committed to strengthening relationships with other electricity utilities to share insights, compare approaches and adopt or complement each other’s strategies where relevant. This is also an opportunity to share costs through co-branding and site sharing arrangements at targeted events.
1. Agriculture

The agricultural sector continues to be over represented in electrical safety incidents.

Current key messages regarding exclusion zones, safety observers and safety campaigns such as ‘Look Up and Live’ are for the most part effective when they are provided face to face however through industry consultation and investigations following incidents, we have identified that a lack of awareness and understanding of the risks, complacency and distraction, are still contributing to incidents.

We need to provide information and materials to assist agricultural workers to develop their own safety management plans to reduce accidental contact with our network.

Traditionally we have targeted much of our advice around harvesting activities – particularly focusing on the sugar, cotton and grain seasons. However, incident data is pointing to a need to broaden the industry scope to cover year-round miscellaneous farm work such as irrigation and spraying of crops.

The increased visibility of safety messages is the primary strategy within this sector. To achieve this we will:

• support and promote the release of an interactive geospatial mapping tool that will provide information about distribution network topology, the location of powerlines on properties, as well as other Local Government data sets
• produce powerline safety induction plans for the agriculture industry to be imbedded as part of their safe systems of work (paper based and electronic) to be used in conjunction with the mapping tool
• participate in targeted projects in partnership with Work Health and Safety Queensland and the Electrical Safety Office including audits and pre harvest assessments on cane rail sidings, with a focus on consultation and communication between growers, contractors, mill and rail staff
• implement hazard assessment criteria specifically related to primary production activities where crops and machinery could come into close proximity with powerlines
• target agriculture education curriculum by Registered Training Organisations and colleges to include a powerline safety awareness module (Train the Trainer guide, videos, and online component)
• increase our joint workings with industry bodies such as Cotton Australia, AgForce and Canegrowers Association to target members of these associations with direct powerline safety communication.
2. Building and construction

Due to the serious nature of incidents and injuries that have occurred over the past three years and the quantity of ‘Clearance to Structure’ (CTS) issues across the state, a greater safety communications focus will be directed towards this industry. CTS issues are detected through our assets inspection program and defined where a structure has been identified as potentially dangerously close to electricity infrastructure. The CTS issue provides evidence to suggest that near hits within this industry sector are significantly higher than the number of actual incidents reported.

Most serious incidents in the building and construction industry could have been prevented with better control measures and the use of a safety observer. There is a need for better understanding among workers about exclusion zones around powerlines.

To improve powerline safety in building and construction we will:

• produce powerline safety induction plans specific to the building/construction industry, which aim to be embedded as part of their safe systems of work (paper based and electronic), and used in conjunction with the geospatial mapping tool
• present face to face and interact with members at Queensland Building and Construction Commission roadshows
• update powerline safety fact sheets and information packs designed for building and construction industry groups
• partner with the Electrical Trades Union, Plumbers Union and the Construction, Forestry, Mining Energy Union to provide powerline safety content and targeted merchandise that can be distributed to their members at building sites and union run events (members to become walking billboards on job sites)
• increase communication and promotion of powerline safety information with crane companies
• partner with Workplace Health and Safety Construction and Industrial Inspectors to conduct joint site audits and equip them with information and educational tools to imbed powerline awareness for this industry on all site visits and at industry forums
• establish and imbed educational content into curriculum targeted at Building Designers, Architects, Structural Engineers and Building Certifiers, who are responsible for designing, approving, building and assessing structures within proximity to electricity assets; aiming to reduce clearance to structure issues
• increase interaction with sign writers and billboard companies and the produce stickers/signage that can be installed on structures in a close proximity to overhead powerlines.

What to do if your truck brings down powerlines

1. **STAY in the truck**
2. If there’s an immediate danger, like fire, and evacuation is ABSOLUTELY necessary, assess your escape route and check for fallen powerlines.
3. **CALL** 000
4. **WAIT** for help
5. Exit the truck by jumping – make sure to land with both feet together.
6. Move in this way until you are at least 10 metres away from the truck.
7. **DO NOT** go back.

STAY in the truck

CALL 000

WAIT for help

10 metres

What to do if your truck brings down powerlines

Powerlink

1800 353 031

Queensland Government

13 16 70

Energex

13 19 62

Part of the Energy Connect Alliance Group
3. Earthmoving

Powerline incidents involving the earthmoving industry often involve heavy equipment, which can create significant ‘downstream’ network problems; including endangering other workers and the public in areas where sections of the network (above or underground) are contacted. Almost 70 percent of these incidents involve contact with overhead powerlines, with excavators and tip trucks the biggest contributors.

A lot of earthmoving work is conducted in areas adjacent to roadways and on busy construction sites. As in the building and construction industry, in most cases, these incidents have occurred due to a lack of control measures and safety observers.

Awareness strategies aimed at this industry include:

• engage with the Civil Contractors Federation to improve communications in this sector and embed powerline safety information into training materials
• partner with more training organisations to ensure workplace and safety curriculum contains sufficient and up to date powerline safety components
• promote the geospatial mapping tool to help operators of earthmoving machinery identify electrical risks on site and apply appropriate control measures
• continue to attend industry related events and advertise in targeted industry publications
• Support the development of a reporting regime with Work Health and Safety Queensland to share information and ensure repeat offenders are identified and reported to relevant authorities.
4. Road transport

Motor vehicle and heavy transport vehicle accidents cause the highest number of reported incidents and dangerous electrical events involving members of the community. Nearly all of these incidents result in power interruptions, many leaving our customers without power for extended periods. Proximity of network assets to roads is an obvious factor in these incidents.

High-load heavy transport, machinery transporters, and livestock transporters are among the known higher risk groups.

Our community advertising campaign ‘TakeCare, Stay Line Aware’ further supports the current ‘Look up and Live’ messages and will focus on planning and risk assessment.

Other road transport industry safety strategies include:
- partnering with the Department of Transport, Queensland Transport Association, Work Health and Safety and the Queensland Police Service to review the permit system of moving loads
- continued targeted marketing campaigns in industry publications and at service stations
- conduct site visits to major transport depots and house relocation/high load businesses to discuss powerline safety issues and safe work practices
- deliver information packs directly to operators and company representatives at industry events
- build relationships and deploy an awareness campaign with the Live Transport Association and AgForce; and attend their events to distribute targeted information.
5. **Aviation**

Aviation covers incidents involving recreational aircraft, commercial aerial spraying operations, mustering and other rural activities. Incidents tend to be seasonal and following large rain falls, and pose significant consequences for pilots, particularly in South Western areas of Queensland on broad acre cultivated properties. Further work will focus on the landowner’s responsibilities to reduce the incidents in this industry.

To help reduce incidents in aviation, we will:

- promote the release of an interactive geospatial mapping tool that will provide information about distribution network topology, the location of powerlines on properties, as well as other Local Government data sets
- further develop partnerships with aviation industry groups and associations including the Aerial Application Association of Australia.
- facilitate pole marking and trials of new aerial markers, promoting their availability and installation requirements through agricultural groups, particularly focusing on landowners
- collaborate with government regulators to introduce a reimbursement scheme for landowners installing powerline markers
- share safety information at industry events and forums.
Index of asset terminology

Overhead conductor
Powerline cable/wires, usually strung along a series of pole structures to distribute electricity at various voltages.

Underground conductor
Powerline cable/wires, run through conduits underground to distribute electricity at various voltages. Most new urban land subdivisions have underground electricity distribution. Energex and Ergon Energy has underground distribution on other sections of its network where feasible.

Pillar
Pillars (turrets, greenboys), as they are often referred to, are small above-ground boxes which serve as a junction point for underground low voltage cables.

Pole
Structure used to carry overhead powerlines. Most poles used across the distribution networks are timber, but concrete poles and other materials are used on some sections of the network.

Stay
High strength, tensioned wire anchored into the ground or attached to another pole to assist the structural integrity of power poles.

MEN wire
In Queensland, the majority of electrical installations employ the multiple earth neutral (MEN) earthing system. This system of earthing requires an electrical connection to be made between the protective earthing system and the neutral connections of the installation.