Reducing powerline fire risk

Why was the program established?
Following the devastating bushfires of Black Saturday in 2009, the Victorian Government established the Victorian Bushfires Royal Commission to consider how bushfires can be better prevented and managed in the future.

The Commission observed that powerlines and electricity infrastructure have caused a number of major bushfires in the past.

The Powerline Bushfire Safety Program was established to deliver improved electricity assets and controls to reduce the likelihood that the Victorian powerlines will be the cause of catastrophic bushfires in the future.

The Powerline Bushfire Safety Program is responsible for the delivery of two of the Commission’s recommendations, Recommendations 27 and 32.

### 2009 Victorian Bushfires Royal Commission Recommendations

#### Recommendation 27
- Progressive replacement of all single-wire earth return (SWER) power lines in Victoria with aerial bundled cable, underground cabling or other technology that delivers greatly reduced bushfire risk. The replacement program should be completed in the areas of highest bushfire risk within 10 years and should continue in areas of lower bushfire risk as the lines reach the end of their engineering lives.
- Progressive replacement of all 22-kilovolt (kV) distribution feeders with aerial bundled cable, underground cabling or other technology that delivers greatly reduced bushfire risk as the feeders reach the end of their engineering lives. Priority should be given to distribution feeders in the areas of highest bushfire risk.

#### Recommendation 32
- Disable the reclose function on the automatic circuit reclosers on all SWER lines for the six weeks of greatest risk in every fire season.
- Adjust the reclose function on the automatic circuit reclosers on all 22 kV feeders on all total fire ban days to permit only one reclose attempt before lockout.

### What is the purpose of the program?
The Powerline Bushfire Safety Program was established as a ten year package to implement a $750 million program of works.

Program activity is focussed on initiatives that will reduce the risk of Victorian powerlines causing bushfires.

The program sets out to reduce bushfire risk in Victoria through the introduction of:
- safer electricity distribution Infrastructure
- improved controls for electricity supply on days of heightened bushfire risk.

The Powerline Bushfire Safety Program provides a unique opportunity to introduce new and improved electricity assets for the purpose of reducing bushfire risk.
The Powerline Bushfire Safety Program is delivering a reduction in powerline related bushfire risk through five interrelated projects, consistent with the recommendations of the Victorian Bushfires Royal Commission.

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<th>Project name</th>
<th>Project description</th>
<th>Max. value of investment</th>
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| Powerline Replacement Fund         | The Powerline Replacement Fund is replacing bare wire powerlines with:  
  • insulated overhead powerline; or  
  • underground powerlines; or  
  • new conductor technologies.                                                                                                   | $200m                    |
| Network Assets Project             | This project requires power distribution businesses to install new network technologies that will better control the faults in Victorian networks, which may cause fires. Technologies include:  
  • remotely controlled Automatic Circuit Reclosers  
  • Rapid Earth Fault Current Limiters (REFCLs).                                                                                   | $500m                    |
| Network Operations Project         | The project informs the rules that are set for each Victorian bushfire season. These rules inform how power distribution businesses control their networks on Total Fire Ban days, as these are the days of greatest bushfire risk.                                                                                       | Annual budget            |
| Research & Development Project     | The project allocates funds to priority research and development, in areas such as:  
  • bushfire mapping and modelling, to direct activity to the locations of greatest bushfire risk  
  • powerline faults and fire ignition, to understand how powerlines may fail and cause bushfires  
  • improved powerline technology, to minimise faults and make powerlines as safe as possible.                                                                               | $10m                     |
| Local Infrastructure Assistance Fund| This project provides for back-up generators to be installed in residential care facilities throughout rural and regional Victoria. The LIAF generators ensure that facilities are able to maintain the continuous supply of power to their residents where power outages occur.                                             | $40m                     |

Where will the program be delivered?

Powerlines will be replaced and new network assets introduced throughout rural and regional Victoria.

The program gives priority to areas where the potential loss of life and property are likely to be the greatest if a bushfire were to start.

These ‘areas of the highest fire loss consequence’ are being identified through a combination of:

- advanced mathematical and mapping models designed to estimate fire loss consequence in different parts of Victoria
- expert knowledge within the Victorian emergency management services about bushfire risk and the challenges of responding to bushfires in particular locations.

The program will continue to review the geographic priorities and revise these as circumstances change over the term of the program.