



SIEMENS

Ingenuity for life

Minimizing the risk of wildfires

With Fusesaver - the world's fastest medium-voltage circuit breaker

usa.siemens.com/fusesaver

An example from Australia

High-risk wildfire days are primarily determined by the temperature, humidity, prevailing wind conditions, and the amount of dry fuel on the ground.

With just a spark from an electrical arc, a wildfire can be ignited, affecting landscapes and lives for years.

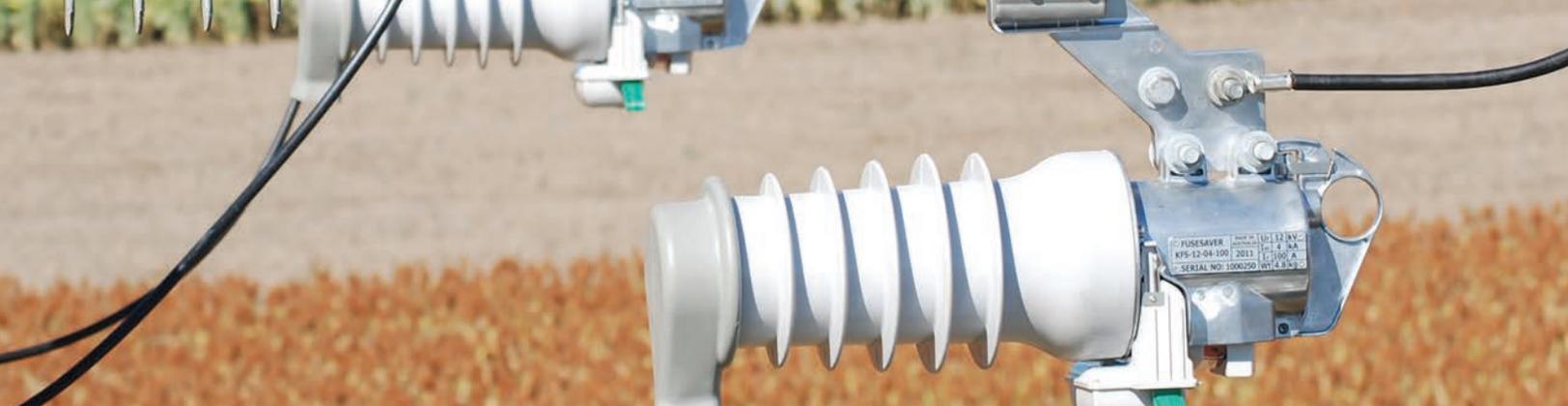
On extreme risk wildfire days, it is critical to eliminate any probability of faults on the electrical network igniting a fire.

Fact: Between 1967 and 2013, major Australian wildfires have resulted in over 8,000 injuries and 433 fatalities with a cost of approximately AUS \$4.7 billion² (USD \$3.4 billion).

Findings of a study¹ show that overhead distribution network operators can significantly reduce the risk of wildfires by implementing these actions:

- 1. Eliminate protective devices that expel molten material during operation.**

Traditional fuses should be removed from high-risk wildfire zones as arc by-products can start fires. Fusesaver provides a cost-effective alternative with encapsulated vacuum interrupter switching that mitigates this risk.



2. Utilize ultra-fast fault clearing circuit breakers to reduce electrical arc hazards.

Arc duration is a significant variable in the probability of an electrical fault causing ignition of a fire. With clearing times in the range of 30–50 ms, traditional reclosers are too slow to prevent an arc causing fire ignition. The Fusesaver is unique in having a clearing time in as little as 10 ms (or one half-cycle).

3. Provide remote access to disable reclosing on high fire risk days.

To enable remote monitoring and operating capabilities, the Fusesaver can be conveniently accessed from the control room.

A remote control unit (RCU) allows for easy SCADA integration and gives the ability to change protection settings and to disable reclosing without the need to be on-site.

4. Synchronize operation to ensure compatibility with resonant grounding schemes.

Single-phase protective devices, such as fuses, can cause instabilities on networks using resonant grounding schemes. Fusesaver provides a synchronized three-phase switching operation for both protection and manual switching activities.

Save money and reduce risk

With a lower capital cost than traditional reclosers, compact design, fast installation time and an unrivalled fault clearing time, the Fusesaver represents a leap in reclosing technology.

While minimising the risk of wildfires, it supports utilities to:

- Minimize insurance premiums
- Avoid litigation
- Protect the distribution network
- Increase network reliability.

Key benefits:



Minimizing the risk of wildfires



Increased network reliability



Improved operator safety



Future proof asset



Fast ROI

Footnotes:

1 Conducted for Energy Safe Victoria by HRL Technology Pty Ltd, "Probability of Bushfire Ignition from Electric Arc Faults" D. Coldham. A. Czerwinski and T Marxsen.

2 2013 Australian dollars, including deaths and injuries but excluding most indirect losses, Source: Ladds M, Keating A, Handmer J and Magee L (2017), "How much do disasters cost? A comparison of disaster cost estimates in Australia".

Published by Siemens Industry, Inc. 2018

Siemens Industry
99 Bolton Sullivan Drive
Heber Springs, Arkansas 72543

For more information, please contact our
Customer Support Center.
Phone: +1 (800) 333-7421

www.usa.siemens.com/fusesaver

Article No. EMMS-T40112-00-4AUS

Printed in U.S.A.

©2018 Siemens Industry, Inc.

The technical data presented in this document is based on an actual case or on as designed parameters, and therefore should not be relied upon for any specific application and does not constitute a performance guarantee for any projects. Actual results are dependent on variable conditions. Accordingly, Siemens does not make representations, warranties, or assurances as to the accuracy, currency or completeness of the content contained herein. If requested, we will provide specific technical data or specifications with respect to any customer's particular applications. Our company is constantly involved in engineering and development. For that reason, we reserve the right to modify, at any time, the technology and product specifications contained herein.