



## Relying on SURELINE® steel power poles to strengthen network reliability.

With a power supply network spread across 95 per cent of New South Wales and parts of Southern Queensland and Victoria, Essential Energy has a permanent focus on its assets' reliability, durability and efficiency.

That's one of the reasons for

the company's increasing use of lightweight, high strength SURELINE® steel sub transmission and distribution poles supplied by BlueScope Steel.

Essential Energy's electricity network consists of more than 200,000 kilometres of power

lines and 1.4 million poles, making it the largest in Australia. As with any energy company, but especially for one with an operational footprint as big as this, network reliability is critically important.



# Sureline®

Client: Essential Energy

Location: Junee NSW

Project: Line upgrade

In Australia, the threat of a bushfire to the reliability of the electricity networks is a critical issue. When tested by CSIRO, SURELINE® steel poles and their galvanised coating were not compromised in full immersion and bushfire passage tests.

Other characteristics of SURELINE® steel poles that strengthen their reliability and long life credentials include:

- internal and external hot dip galvanising to extend the poles' life
- polymer coating to provide protection from corrosion in oxygen rich soils
- total resistance to termite infestation, a widespread problem across Australia.

After undertaking field trials of SURELINE® steel poles some years ago, Essential Energy accepted the engineered poles into their standards, having found them particularly useful in challenging locations.

The work of crews from Essential Energy's Junee depot in southern New South Wales illustrate how the SURELINE® steel poles have fitted into their operations.

Regional general manager Southern, David Nardi explained, "We are carrying out a number of powerline

replacement jobs because the old conductor has reached the end of its working life.

Because our construction standards have changed since the poles and wires were installed some years ago, we've replaced a number of power poles with taller structures to offer increased clearances."

In an area previously affected by bushfires, the decision was made to install 12.5 metre SURELINE® steel distribution poles wherever possible.

Essential Energy depots routinely keep SURELINE® poles in stock, but extra supplies were ordered for the Junee to Eurongilly line upgrade, among others.

Area manager Riverina, Shawn Eade said the Junee field crews prefer to work with SURELINE® poles rather than with timber.

"The finished result looks neater and you feel you are doing a better job and using a pole which should outlast us all.

"To be fair, some of the timber poles we are replacing in this area are decades old, and the timber poles available now are not of the same quality as those we are replacing."

Termites are prevalent in many areas of southern and western New South Wales and their

impact on the pole population is increasing as some treatments are no longer used on the poles and residual chemical levels are declining.

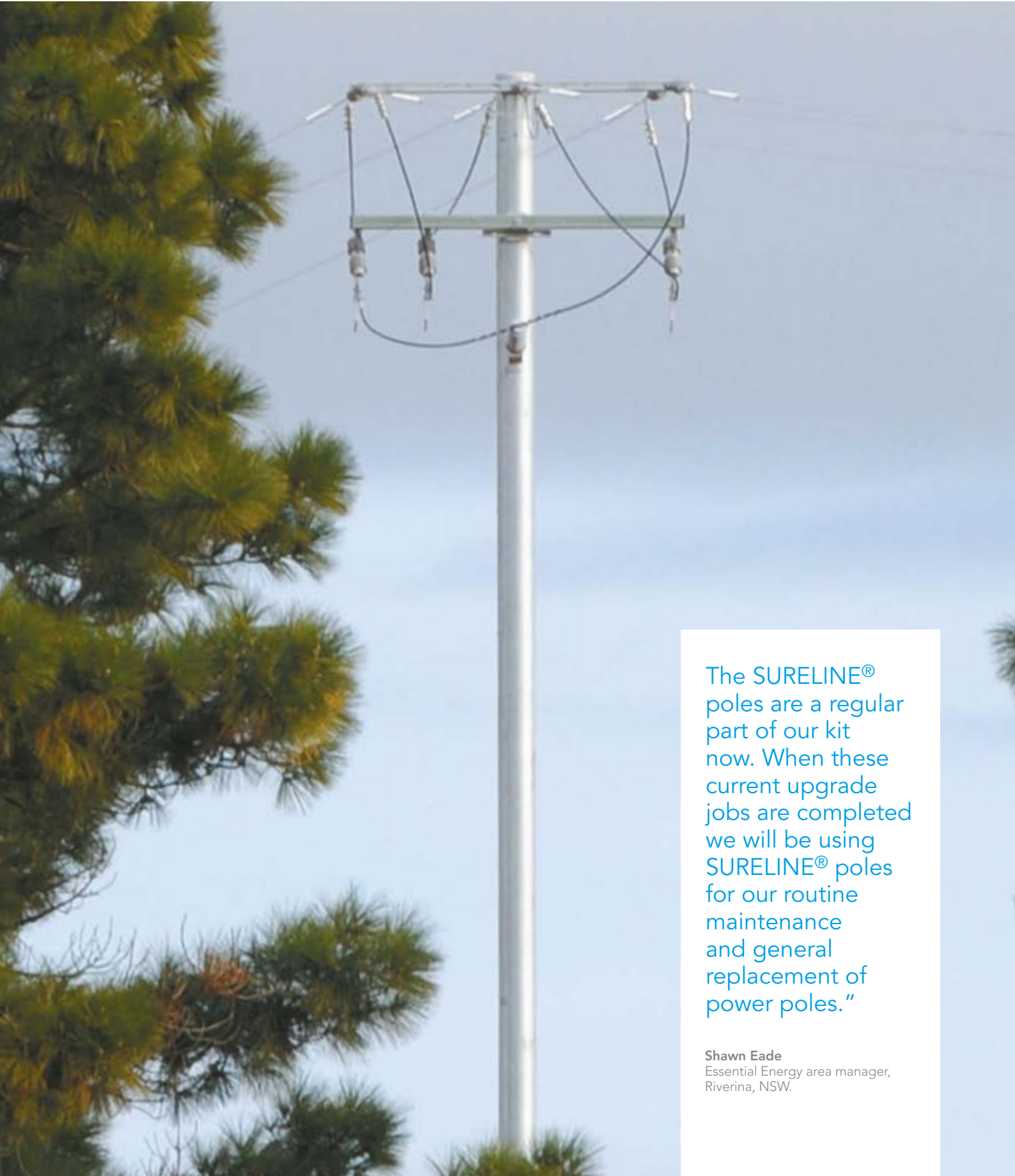
David explained that Essential Energy is now using alternative materials for power poles in areas where termites are a problem improving network reliability and reducing the risk of damage.

"Essential Energy's Junee crew's experience has been that the SURELINE® steel poles are easier to work with than alternatives. Plant requirements are simpler – particularly for handling the lightweight and parallel-sided steel poles. Together, these two characteristics enable easy load stacking movement and handling", David said.

"There's generally no need to send out a crane for dressing work, sometimes a long way from base, because two men can go out and spin the poles and put cross arms on them without having to lift them.



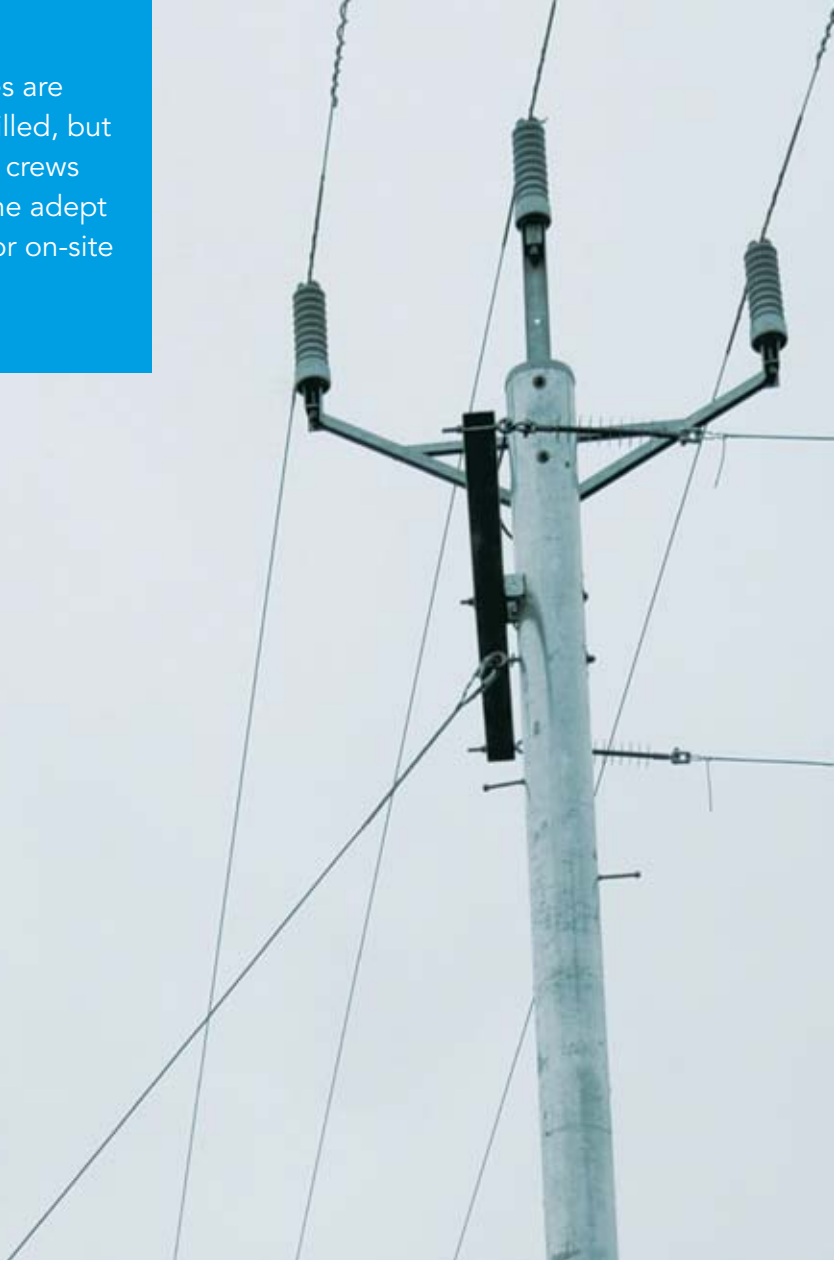
12.5 metre SURELINE® distribution poles have been installed in an area previously affected by bushfires.



The SURELINE® poles are a regular part of our kit now. When these current upgrade jobs are completed we will be using SURELINE® poles for our routine maintenance and general replacement of power poles.”

**Shawn Eade**  
Essential Energy area manager,  
Riverina, NSW.

SURELINE® poles are delivered pre-drilled, but Essential Energy crews have also become adept with step drills for on-site changes.



“Even in situations where a crane is needed you can use a smaller crane than other pole types would require.”

Minimising the amount of machinery and manpower needed to install the poles delivers enhanced productivity and cost savings. One reason this can be achieved is due to the high strength to weight ratio of BlueScope Steel's dedicated grade of steel. An outcome of using a lightweight pole is that the poles can be manoeuvred in difficult terrain using lighter mobile

equipment that can navigate the area to complete the job.

On some projects Essential Energy brings in crews from surrounding areas to change over up to 30 timber poles to SURELINE® poles in a day.

Feedback from rural land owners along the route of the latest upgrade has also been very positive. The bushfires of 2006 that destroyed many timber poles and caused power outages, are still well remembered by the rural communities.

“Even one of our own employees got burnt out,” Shawn Eade said. “Now rural residents' attitude is that the SURELINE® steel poles give them one less thing to worry about in the next fire.”

“The SURELINE® poles are a regular part of our kit now. When these current upgrade jobs are completed we will be using SURELINE® poles for our routine maintenance and general replacement of power poles.”



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