Western Power’s electricity network includes more than 97,000 kilometres of powerlines and more than 800,000 poles and towers. More than 90 percent are made of pine, jarrah, blackbutt or other woods.

97,000 kilometres of powerlines
630,000 distribution wood poles
73,000 poles to be replaced or reinforced between 2013/14

Of these wood poles, 60 per cent are in rural areas and 26 per cent are in high or extreme fire risk areas – Western Power’s top priority for maintenance and replacement.

Western Power’s approach involves directing investment based on fire risk zones so that wood poles in extreme fire risk zones are prioritised above others.

Western Power aims to manage its wood pole network in a way that ensures reliability and public safety while reducing environmental impact and the cost of service to customers.

Why wood?

WESTERN POWER PREDOMINANTLY uses wood poles, rather than metal or concrete, as they have proven to be the most cost-effective option over the expected life of a pole.

Pine poles meet technical requirements in terms of mechanical strength and height to accommodate electrical safety requirements. Being non-conductive, they are safer for both employees and the public. Most new poles come from local Radiata Pine plantations (a renewable resource) and are treated with fire retardant paint that helps reduce their combustibility.

Steel - more expensive than wood

STEEL POLES are more expensive than wood poles and are easily damaged in transport and by vehicle accidents.

Concrete poles are also relatively expensive, cannot be customised on site and are susceptible to concrete cancer.

Western Power regularly reviews alternatives to wood poles, with fibreglass reinforced concrete showing promise as a future option.

Other networks allow for greater use of conductive poles like steel due to the earthing systems they use which mitigate hazardous voltages and the risk of electric shock. The Western Power distribution network has been designed for wood poles and as such, in most areas the earthing system is not suitable for conductive poles. To change the earthing system would require a large financial investment.

Western Power is working hard to ensure its network is safe, reliable and affordable.
**Inspected on a four-year cycle**

ALL 660,000 WOOD POLES across the network are inspected on a four-year cycle for signs of termites, fungal rot or other damage. The inspection process considers whether a pole can be safely reinforced, otherwise it will be replaced.

**Age, strength and condition**

THE AGE OF A POLE does not necessarily determine its strength and condition. Some old poles can still be in very good condition. Other factors include local environment, soil type and wetness, the type of wood and the degree of insect and fungal damage.

Reinforcing poles can extend their life by up to 15 years, reducing maintenance costs and pressure on power prices.

**Overhead vs underground**

WESTERN POWER BUILDS and maintains the network in the most economically efficient way possible. While there are economic benefits in sinking powerlines underground, they do not currently outweigh the high cost associated with removing existing powerlines and placing them underground.

The State Underground Power Program (SUPP) is a way to share this cost with others who value the other benefits of undergrounding such as aesthetic improvements in streetscapes. SUPP is funded 50 per cent by local governments (through the ratepayers who directly benefit), 25 per cent by the State Government and 25 per cent by Western Power.

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**Contact information**

Faults & emergencies, power interruptions, estimated restoration times (24 hrs) 13 13 51

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This information is available in alternative formats on request.