

# Regulated electricity networks, investment mistakes in retrospect and stranded assets under uncertainty

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**Abstract** From 2004 to 2018 the Regulatory Asset Base (RAB) of electricity networks across Australia's National Electricity Market tripled in value, from \$32 billion to \$93 billion. The run-up in the capital stock was driven by forecast demand growth and a tightening of reliability standards. But demand contracted from 2010-2015. With a rising RAB, contracting demand and a regulated revenue constraint, an adverse cycle of sharply rising tariffs and falling demand appeared to be emerging. Some networks were characterised by significant investment mistakes in retrospect, and perhaps unsurprisingly, various consumer groups and regulatory bodies argued assets should be stranded or written-off completely and network tariffs reduced. From 2015-2018, energy demand increased once again. In this article we present a method for dealing with stranded assets under uncertainty; rather than permanently stranding assets that fail a used and useful test, we reorganise the financial and economic affairs of a template network utility and "Park" excess capacity, issue credit-wrapped bonds to temporarily finance the stranded capital stock, then re-test the Parked Assets at the end of each five-year regulatory determination. Parked Assets can then be "Un-Parked" and returned-to-service in line with connections growth, load growth, or both. The most interesting result is the immediate reduction in network tariffs, and a more stable trajectory under our generalised assumptions.

**Keywords** Electricity Utilities, Falling Demand, Stranded Assets

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