



ENA

## **NETWORK ASSET WRITE-DOWNS:**

### **A REGULATORY 'FREE LUNCH'?**

**GARTH CRAWFORD, EXECUTIVE DIRECTOR, ECONOMIC REGULATION  
AIE BREAKFAST, 4 DECEMBER 2014**

## Some opening propositions...

- > Policy proposals should be assessed on the balance of their risks, costs and benefits
- > “Free lunches” usually do not exist, or have hidden costs
- > Current and potential investors pay attention to history

# Background

- > Number of proposals advocating write-downs with varying level of detail
  - MEU rule change
  - Grattan Institute report
  - PIAC paper
- > Difference between regulatory asset value write-down and ordinary commercial write-downs

# Claims for regulatory 'write-down' proposals

- > Reduced customer bills
  - network charges typically make up 30-50% of final bills
- > Resulting in better ability for regulated networks to 'meet the market'
  - reducing commercial stranding risks
  - avoids the utility 'death-spiral'
- > Reflects the outcomes that are observed in normal competitive markets

# Approach of the research paper

- > Review the regulatory policy rationale and history around establishment of locked-in regulatory asset bases
- > Scenario-based modelling of the potential impacts on network financing costs, required revenues, and consumer prices of three write-down scenarios
- > Discussion of the economic efficiency consequences of regulatory write-down proposals, from the perspective of the long-term interests of consumer

# Regulatory policy framework

- > Networks regulated under *National Electricity Law and Rules*
- > Objective of long-term interests of consumers
- > Current incentive-based regulation
  - ‘reasonable opportunity’ to recover ‘at least efficient costs’ to deliver services
  - ‘Building blocks’ approach with total revenue based on recovery of benchmark efficient operating costs, return on capital (WACC) and return of capital (depreciation)

# Role and treatment of RABs

- > Previous *National Electricity Code* and jurisdictional application
- > Original establishment of RABs
- > ACCC 2004 Statement of Regulatory Principles
  - consideration of investment certainty issues
- > Movement to National Electricity Rules
  - Australian Energy Market Commission and Ministerial Council decisions (2006-07)
- > Roll-forward model

## Basis of regulatory decisions on risk...

**“The AER notes there are a number of features of the regulatory regime which minimise the risks associated with long lived assets (e.g. there is no asset stranding risk, the regulated cost of debt reflects market conditions and the asset base is not periodically revalued). It is expected that the outcomes of this review will continue to provide returns for NSPs which are sufficient to attract and compensate for both equity and debt funding.”**

AER Review of WACC parameters – Explanatory statement (December 2008), p.4



# What does the regulatory literature say?

- > Kolbe and Tye: cost of capital does not compensate for regulatory stranding risk
- > Vogelsang (2014) - two choices:
  1. compensate *ex ante*: insurance premium delivered through cash-flow adjustment, depreciation or additional cost of capital premium
  2. compensate *ex post*: lump sum?
- > Neither of these approaches have occurred in electricity networks

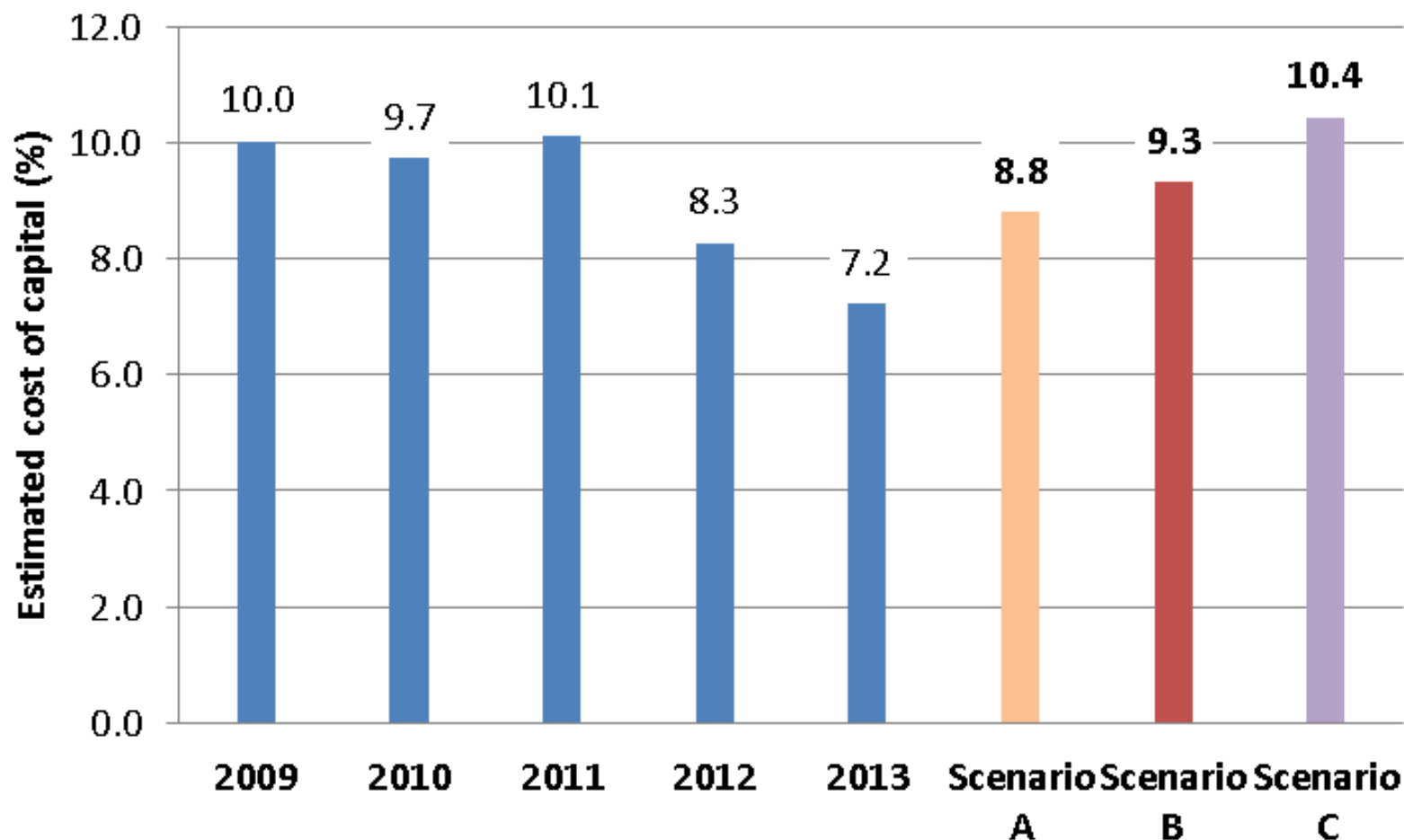
# Three write-down scenarios modelled

	Value (\$bn)	%	Equivalent to
<b>A - Significant</b>	4.9	5.3%	Value of all ACT, SA and Tasmanian distribution assets
<b>B - Large</b>	9.2	10%	Value of all Vic and Tasmanian distribution assets
<b>C - Extreme</b>	20	20%	Value of all Australian transmission assets

# Indicative modeling approach

- > Modelling based on an 'expected' return approach
  - if equity investors expected a 10% chance of a write-down of the regulatory asset base of X%, what is the **new** expected return required just to recover the return on equity currently used by the Australian Energy Regulator?
  - this approach assumes no systematic risk effect
  - write-downs are treated as exogenous 'random' event (a 'coin flip game')
- > Based on Kolbe and Tye (US nuclear power)

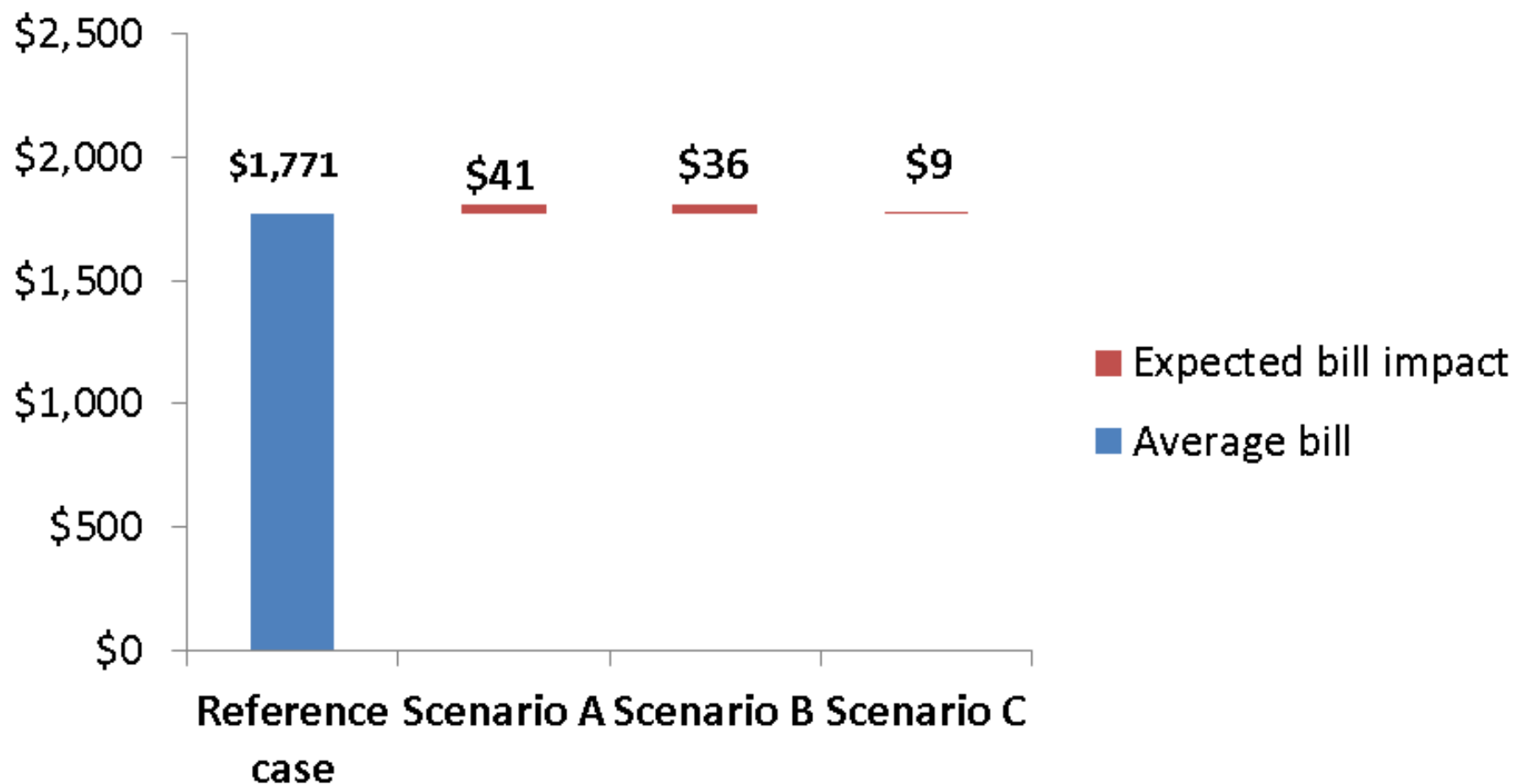
## Scenario required cost of capital



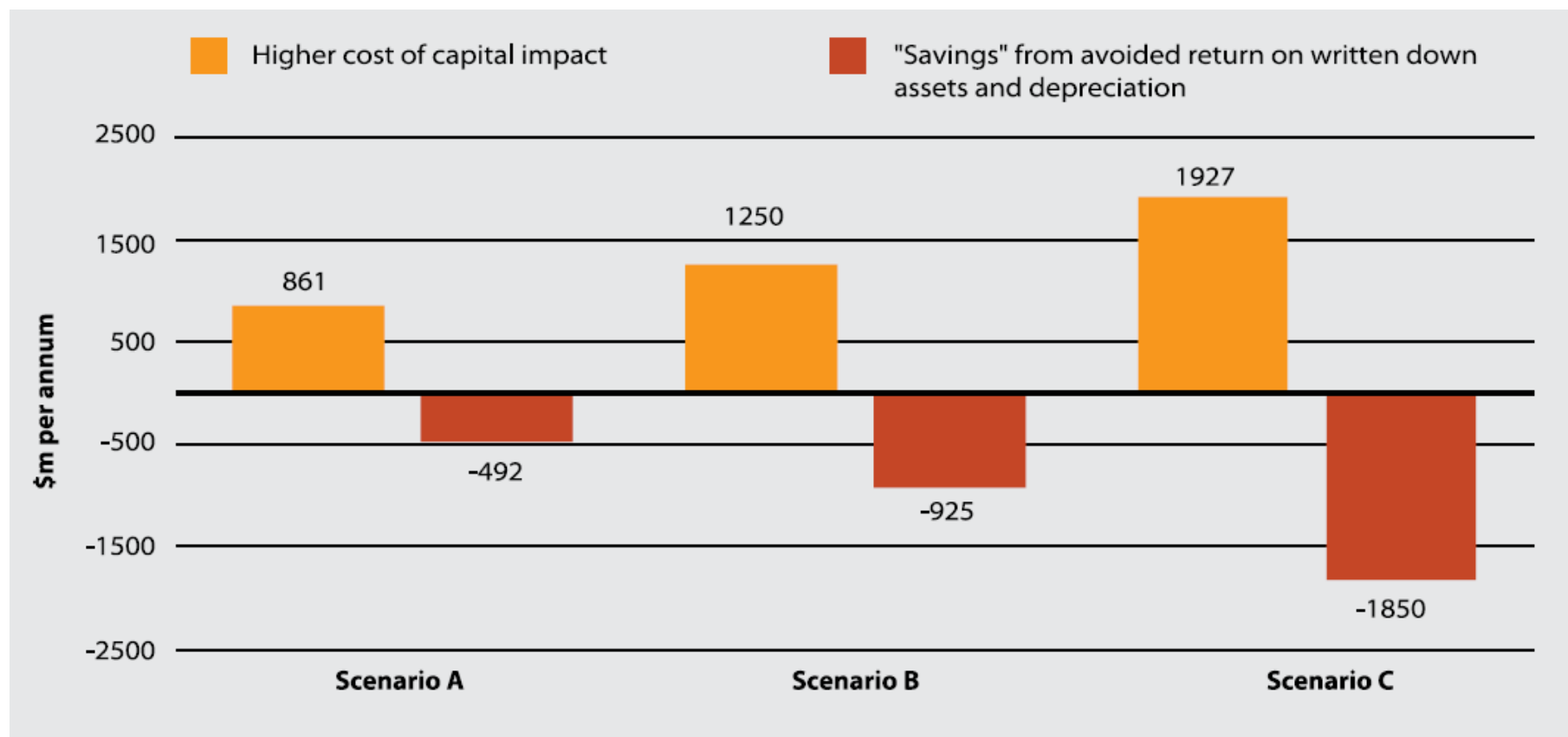
## Some key findings

- > Significant regulatory asset write-downs (5.3%) would generate **higher**, rather than lower, network tariffs
- > Increasing the scale of any proposed write-down would **not** lead to tariff falls (10% or 20%)
- > Write-downs would *reverse* existing downward pressures on the cost of capital and prices
- > Write-downs would likely **worsen the risk** of any 'utility death-spiral', not lower it
- > Even a small increase (0.5%) in the future cost of capital resulting from the risk of write-downs would completely offset any notional 'savings' of such write-downs

# Indicative initial year bill impacts

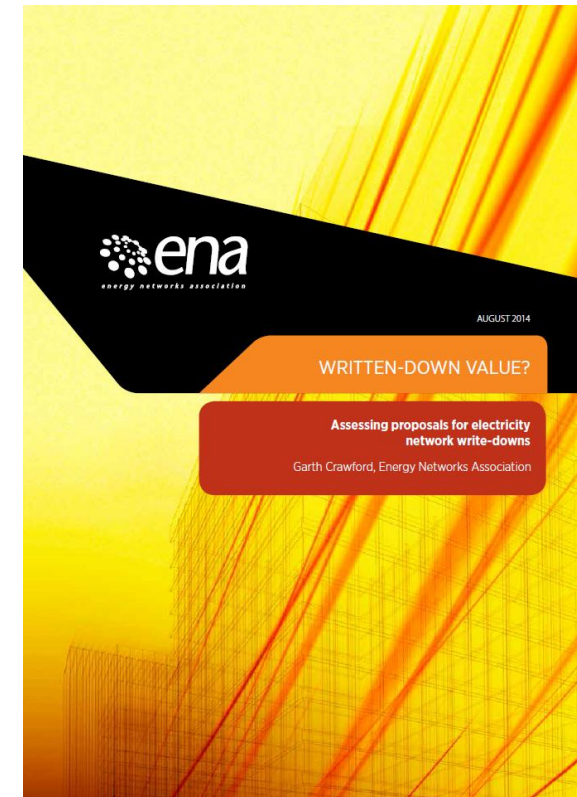


# Impacts of write-downs on required revenues



# Risk is on the downside for consumers...

- > Highly conservative approach assumes capital markets can efficiently price the new risks, without a sovereign risk premium
  - i.e. investors take massive write-down event 'in their stride'
- > Analysis excludes likely impacts of:
  - financing future network capex – potentially up to \$1.8 bn additional financing costs.
  - financeability adjustments required to underpin ongoing operation
  - 'substitution effects' such as distorting preferences for opex/capex





# Potential efficiency impacts

- > Cancellation or deferral of discretionary capital expenditure
- > Change to the mixture of operating and capital costs
- > Increased operating cost solutions (recovered from current consumers with equity issues)
- > “Second round” impacts include potential for price volatility and shocks
- > Wider ‘regulatory risk’ margins
- > Implications of optimisation/stranding
  - re-opening of asset bases (in service assets)
  - re-inclusion of assets utilised in future?

## Revisiting the original claims...

- > Significant write-downs lead to higher, not lower, network tariffs:
  - Australian consumers could pay over \$320 million in increased network charges each year
  - increased to average bill up to 2.4%
- > High risk, extreme write-downs remain negative for consumers
- > Write-downs reverse existing downward pressures on the cost of capital – a return to GFC levels
- > Write-downs would likely increase the risk of any 'utility death-spiral', not lower it

# Incomplete regulatory contract?

- > *"If only policy and rule makers had considered the possibility..."*
- > What would we have agreed *ex ante*?
- > Requires:
  - significant regulatory amnesia
  - ignoring AER decisions on risk assumptions and sharing made within the past 12 months
- > Problematic if followed through to logical conclusion
  - evidence from competitive markets (take or pay?)



# Pre-emptive write-downs preferable

- > *"If we do this now and quickly, it will hurt less, promise..."*
- > *"Everyone can win!"*
- > Requires quite counterintuitive assumptions about:
  - how investors interpret observed regulatory stranding
  - investors evaluation of alternative future cash-flows
- > Last 17 network transaction valuations: RAB multiple 1.4
- > To "break even" from PIAC proposal > 2.3 RAB multiple



# Investors already compensated...somehow

- > *"Past returns compensate any losses imposed"*
- > Rejected by regulatory literature
- > Requires belief that AER has acted in breach of rules
- > No evidence of:
  - regulatory intention
  - rates of return that would be sufficient to compensate
  - calibration to potential losses of each network
- > Unlikely to persuade future investors



# So what is to be done?

- > Recognise the strong consumer benefit in capacity to efficient finance long-lived capital investments
  - “first do no harm” principle
- > Strengthen networks access to same tools that are used in the competitive market to manage risks
  - flexibility over depreciation approaches
  - prices that provide efficient usage and consumption decisions
- > Emergence of competition should direct attention to ensuring frameworks have:
  - adaptability to emerging competition
  - calibrated forms of price control to residual ‘bottleneck’ power

**Thank you**