Preliminary Findings: practical assessment

Review into the use of total factor productivity for the determination of prices and revenues

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Practical assessment

- Three part assessment carried out:
  - the pre-conditions relevant for the practical application of a TFP methodology
  - potential impact of a TFP methodology on the regulatory framework
  - potential application of a TFP methodology to the electricity and gas sectors
- The assessment is based upon the current building block arrangements as the counterfactual
- This assessment relaxes the previous assumptions that the necessary data-set is available and calculation of a TFP index issues has been resolved and accurately measures industry productivity

Pre-conditions for a TFP methodology

The pre-conditions identified were:

1. a collection of standardised reliable, robust and relevant data from service providers that will aid in effective regulation

2. a design of a TFP index that accurately measures industry productivity growth

3. the design of a TFP index must be tested on:
   - the formation of industry groups
   - degree of influence of operating conditions on the TFP index
   - extent that the TFP index is a good estimate of future productivity growth
   - the stability of the TFP index over time

Pre-conditions - data

A collection of standardised reliable, robust and relevant data from service providers.

- For a TFP methodology to be available, a data-set of actual outputs and inputs for service providers over time is required.
- A robust data-set will assist the AER in using the building block approach, address information asymmetry concerns and provide a basis for more reliable comparisons and benchmarking.
- However, the current available data for all service providers does not have the desirable features.
- The AER and service providers need to work on forming regulatory reporting regimes that will support the use of a TFP methodology as well as the building block approach.
- Can this be done within the existing provisions of the NER and NGR? Are additional rules required?

Pre-conditions – measure of productivity

Design a TFP index so that it accurately measures industry productivity growth.

- This requires a robust specification of outputs, inputs and weightings so that the resulting TFP index is in the best position possible to capture factors that impact on service provider productivity growth. It also needs to be consistent with key objectives of financial capital maintenance and reflect service provider activities.
- A TFP index can be designed to provide the opportunity for service providers to recover efficient costs.
- While system security and reliability for electricity distribution service providers is difficult for TFP to capture, it can be excluded from the TFP index without impacting on incentives to carry out these activities.
- It is unlikely that an index will be unduly influenced by service providers – there is little opportunity or incentive to do so.

- More work on TFP specification during stage 2 of the Review.

Pre-conditions – measure of productivity (2)

- The preliminary findings are that once some relevant data has been collected, empirical testing can be carried out on:
  - measuring outputs for the transmission sectors
  - whether service providers within a group do face comparable expected productivity growth (that is, whether operating conditions have little influence on productivity growth)
  - the ability of the TFP growth rate to estimate or accurately predict future productivity growth
  - the ability of the TFP growth rate to provide a price path that is no more volatile than under the building block approach

- This will then allow specification details to be finalised on these issues

Potential impact on the regulatory framework

- The potential practical benefits of a TFP methodology, compared to the building block approach, are:
  - lower regulatory costs
  - less regulatory decisions reviewed and appealed in the long term
  - improved demand management incentives for electricity distribution service providers

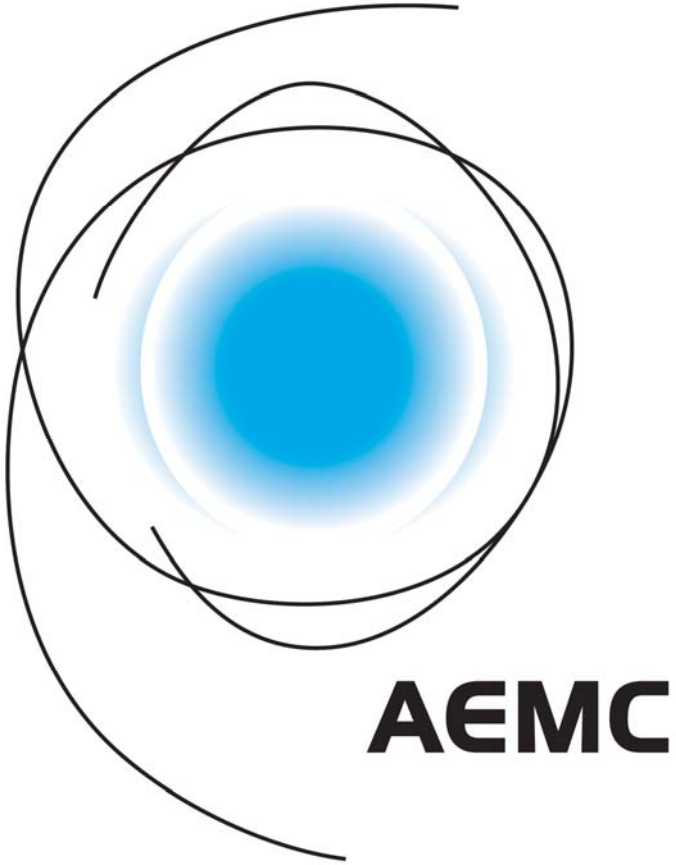
- No other issues provide a significant reason to not introduce a TFP methodology:
  - incentives to maintain or improve service quality
  - criteria and scope of regulatory discretion
  - does not prevent the development of a nationally consistent regulatory framework
  - depreciation profiles should reflect actual service life of assets and assets are to be fully depreciated once

Application to the electricity and gas sectors

- It is likely that a TFP methodology could be appropriate for the electricity and gas distribution sectors but:
  - need to test the formation of the industry groups
  - TFP index specification

- It is less likely that a TFP methodology could be appropriate for the electricity and gas transmission sectors. Need to test for:
  - stability, accuracy and reliability of the TFP index (such as, lumpiness of capital expenditure)
  - formation of industry groups

- Data reporting regime is required to provide relevant data to test details and finalise aspects of the TFP methodology.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