

AEMC

Review into the use of Total Factor Productivity for the determination of prices and revenues

Australian Pipeline Industry
Association

11 February 2009

Key messages

- TFP has apparent appeal – but it is superficial
- It isn't what it seems to be
- Not even clear what "IT" is
- Regardless of viability for distribution, it is not viable for pipelines
- Pursuit of effective incentive regulation is what is called for to meet challenges ahead
 - Focus on dynamic rather than productive efficiency

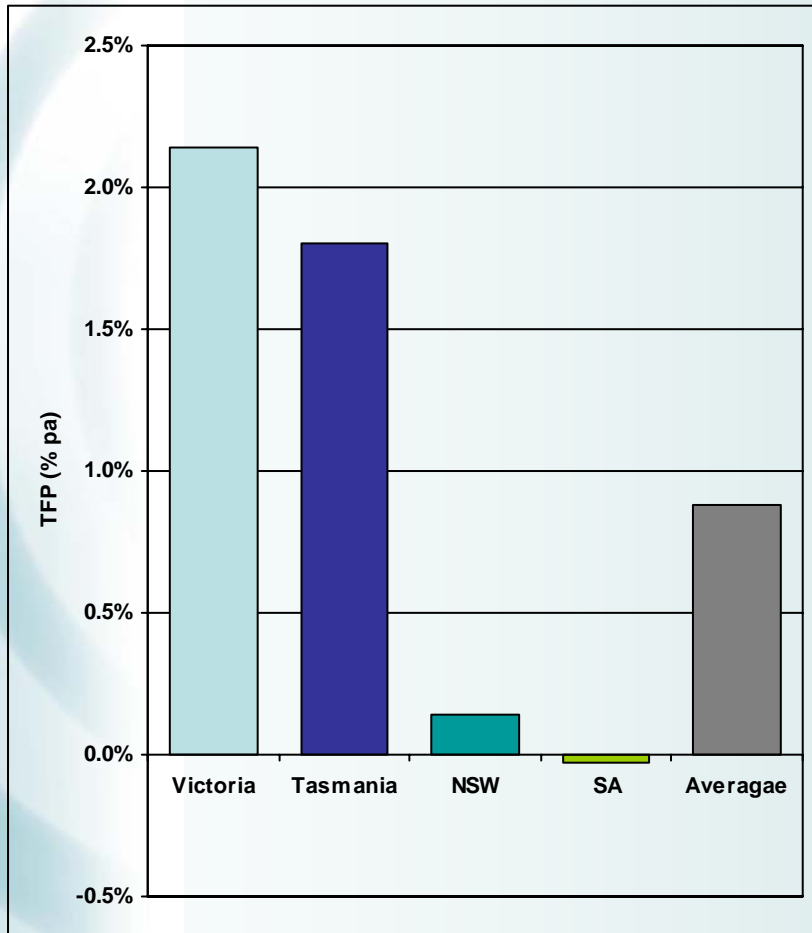
Apparent appeal of TFP

- Not information intensive
- Not reliant on forecasts
- Overcomes information asymmetry
- High powered incentives
- Potentially longer periods between reviews
 - Businesses can get on with business
- **BUT**

Issues with TFP

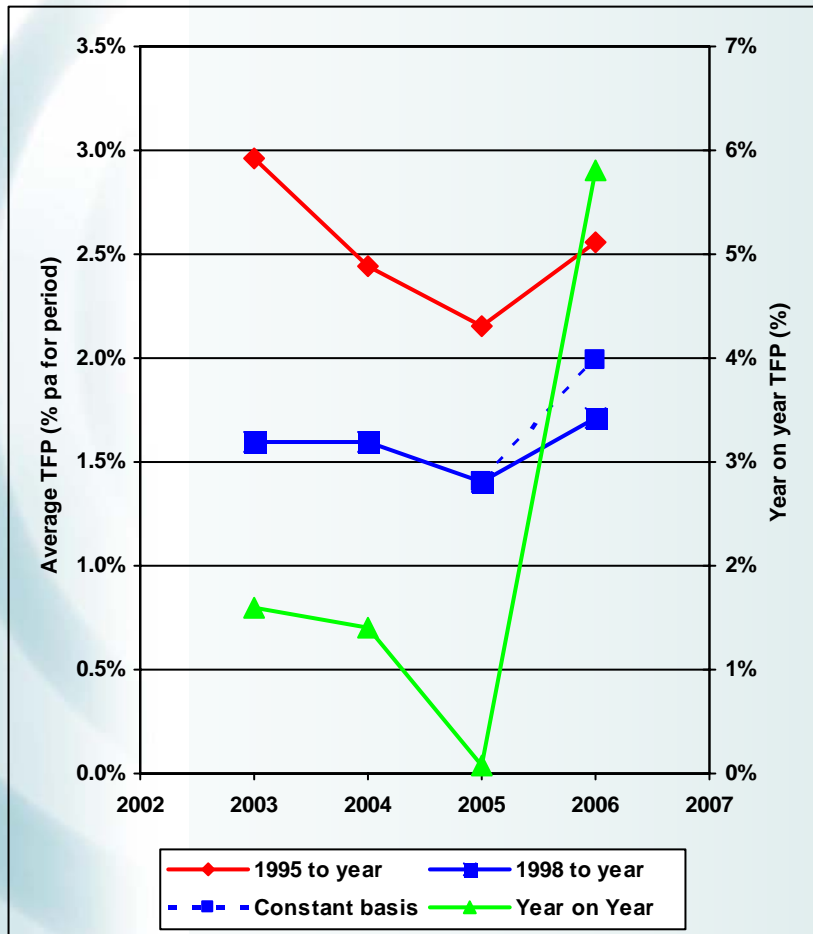
- It's a black box – not transparent
- Experts don't agree on the fundamentals
 - inputs, outputs, weights
- Reflects past efficiency improvements, not future/potential efficiencies
- Deals with both capital and opex efficiency
 - Not compatible with established capital bases
- Significant differences between prices and costs unsustainable for policy makers and businesses
- TFP inconsistent with revenue and pricing principles of NEL and NGL
- Doesn't deal with lumpy capital
- Doesn't deal with futures materially different from past
- Still requires application of cost of capital – past rather than forward-looking
- ...

Jurisdictional TFP values (PEG/ESC, 2006)



- Diverse results
- If difference are real, suggests case for firm-specific adjustments
- If not real then results are very sensitive to data quality and method
- Objective test for inclusion in “industry”

TFP trends for Victorian electricity (PEG, various reports)



- PEG recommends long term trend excluding 1995-98 “burst”
- 2006 increase highlights significance of model definition
 - 2006 was first year of new regulatory period
 - constant basis 1998 to 2006 trend is 1.99%
 - year on year TFP was 5.8% of which 4.2% was due to output growth

Specification of TFP model

- A number of significantly different alternatives
- Refinements likely to be required
- Final result
 - Still imprecise
 - Still backward looking
 - Will look a lot like building blocks
 - More complicated and less transparent

Pipelines are not like networks

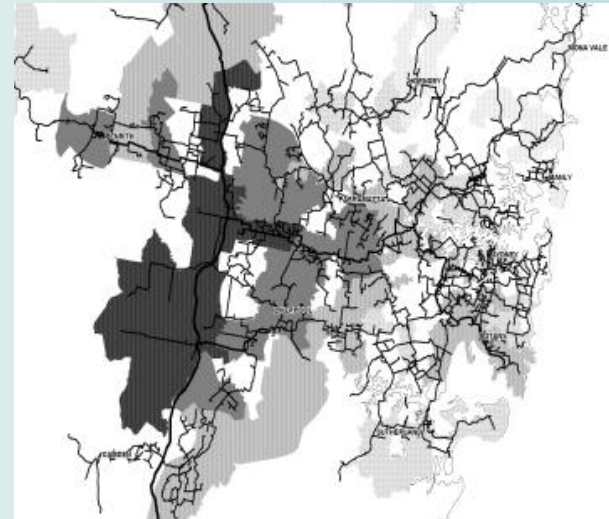
Pipelines

- Point to point
- Small numbers of users
- No relationship with consumers
- Highly capital intensive: lumpy capex
- O&M mainly inspections and fuel
- High pressure with compression
- Few receipt and delivery points
- ALL PIPELINES ARE DIFFERENT



Networks

- “Spaghetti”
- Small numbers of users
- Deal with consumers
- Capital intensive: continuous capex
- O&M mainly repairs, metering and UAG
- Predominantly medium and low pressure, with free flow
- Few receipt: many delivery points
- NETWORKS SIMILAR IN MANY RESPECTS



Question: if introduced, should TFP extend to pipelines?

- Differences between transmission and distribution
 - Lumpiness of capital acknowledged to be problematic
- Differences between pipelines
 - Physical: diameter, length, terrain, pressure, compression, age, technology
 - Commercial: load characteristics, capital base, market maturity/growth, extent of spare capacity

Comments on process

- Issues canvassed well in AEMC paper
- Scope and criteria appropriate
- To properly canvass issues in detail contemplated by questions likely to require more than 12 months
 - High level recommendation in 12 months
 - Longer to have fully specified system
 - Full specification will require specialised consultation e.g. with working groups

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- TFP has apparent appeal – but it is superficial
- It isn't what it seems to be
- Not even clear what "IT" is
- Regardless of viability for distribution, it is not viable for pipelines
 - Early notice of AEMC intentions would be appreciated
- Pursuit of effective incentive regulation is what is called for to meet challenges ahead
 - Focus on dynamic rather than productive efficiency