

# Key issues

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

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# OVERVIEW

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- Design principles and criteria
- Discussion issues

# DESIGN CRITERIA

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The design example in the discussion paper and for today's workshop has been formed:

- to be consistent with the economic theory of TFP
- to provide incentives to incur efficient costs and share efficiency gains with users
- to support the efficient investment in assets
- to provide the opportunity to recover efficient costs
- with regard to the possibility of variations in expenditure profiles
- with regard to good regulatory practice
- to minimise the cost and impact of regulation

# SESSION ONE

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- How should a TFP methodology be applied in the existing regulatory framework? What is the role for the AER?  
(blue group)
- How should the industry group be defined to calculate the TFP index?  
(silver group)

# 1. HOW TO APPLY A TFP METHODOLOGY

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- A high level of prescription in the NER and NGR
- Non-binding guidelines required from the regulator
- Use of TFP is for the service provider to decide
- Current timetables for regulatory decisions to apply
- Principles and method are 'locked in' for the duration of the regulatory period

# WHY?

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The key rights, principles, mechanics and obligations of a TFP methodology would be specified in the NER and NGR

- to provide clarity and certainty in how a TFP methodology would operate
- to reduce the cost of regulation by limiting the elements open to variations and discussion
- Support NER and NGR with guidelines

BUT

- still need provide some flexibility

## 2. HOW TO DEFINE THE INDUSTRY GROUP

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Two options:

1. One single TFP growth rate factor for each sector

TFP growth rate calculated from all regulated service providers in each sector

2. Divide sectors into sub-groups according to operating conditions

TFP growth rates calculated for each sub-group from all regulated service providers in each sub-group

Sub-groups:

- urban & high density, urban & low density
- rural & high density, rural & low density

# WHY?

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- The industry group would be specified in the NER and NGR as setting the industry group has a clear impact on the resulting TFP growth rate
- But what should an industry group be?
  - setting a group as all service providers in a sector would give a comprehensive result
  - setting a group as a subset of service providers could be difficult and may allow one service provider to over-influence the TFP growth rate
- Do operating conditions and current behaviour influence the TFP growth rate?





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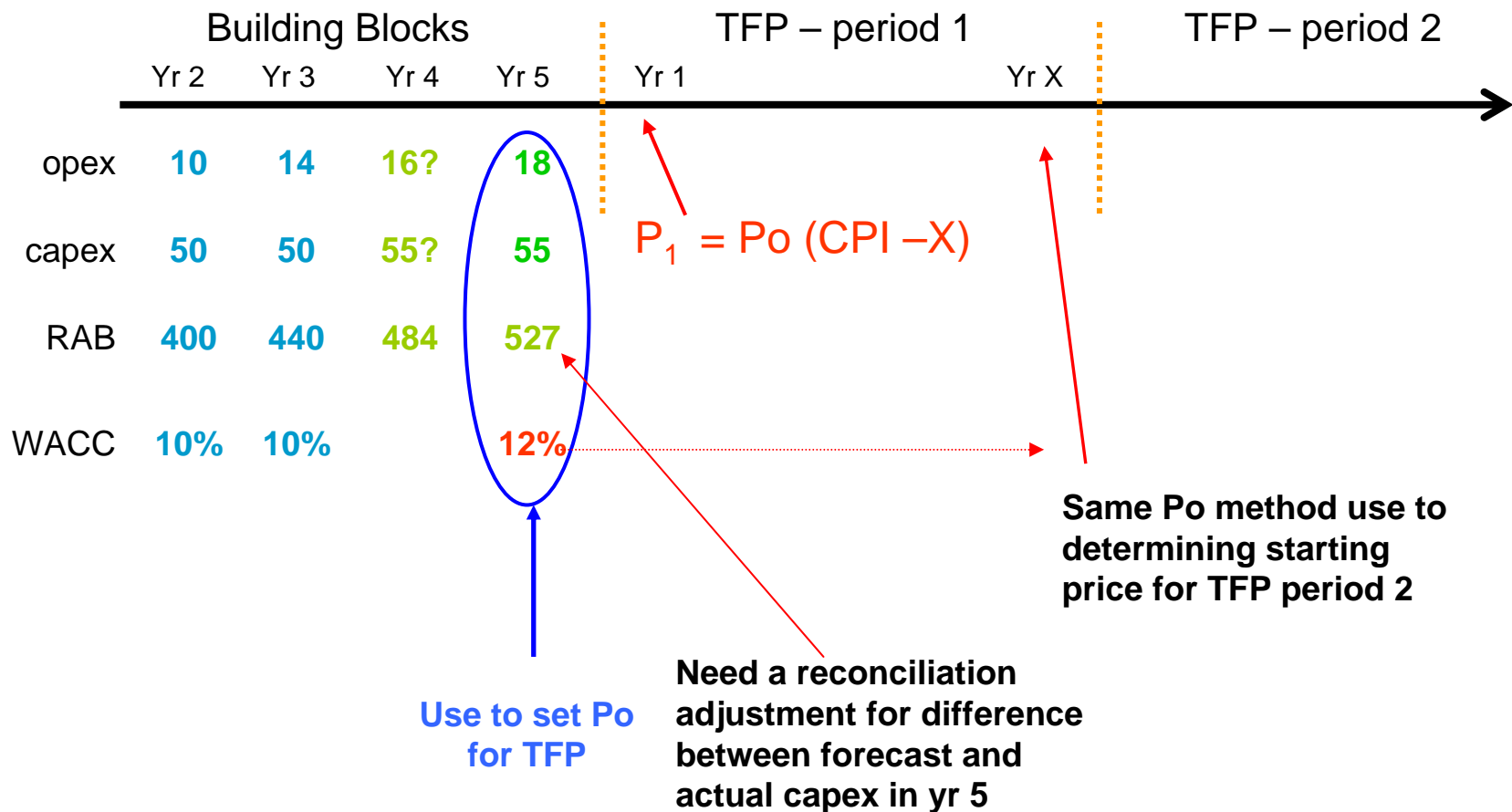
# AEMC

# HOW TO DETERMINE THE INITIAL PRICE

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- Partial building block approach used:
  - reasonableness assessment of opex and capex based upon known actual costs and business' updated forecasts
  - current RAB roll-forward approach
  - current approach to determine the rate of return
  - current approach to estimate tax
- Using actual costs, form a forecast for year 5 costs to then apply CPI-X to set the price cap for year 6 (year 1, period 2)
- Applied when moving to TFP from a period that used the building block approach or a TFP methodology
- Consideration of likely future changes in costs

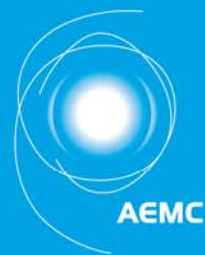
# Design Example – Initial Price Calculation



# WHY?

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- Actual prices may not be efficient and therefore there is a risk of locking in excess profit for TFP period
- Need to have consideration of future cost drivers
- Need to realign costs and prices at end of a TFP regulatory period



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# AEMC

# SESSION TWO

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- What terms should be included in the price path?  
(silver)
- What additional design terms should be included in the TFP methodology to provide it with some flexibility?  
(blue)

# 1. WHAT TERMS IN THE PRICE PATH?

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- The price path formula would be specified in the NER and NGR.
- In addition, the NER and NGR would specify:
  - the measure for the industry input price growth
  - that the economy input price growth would be measured by the producer price index
  - business specific adjustments could be made by the regulator to the X factor

# WHY?

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- Like the definition of the building blocks approach and its terms, the TFP price path formula and its terms would be set out in the NER and NGR
- A more robust formula would not assume that the economy and industry input price growth are the same when evidence suggests that they are not
- Including a business specific adjustment factor would allow for business specific circumstances and the varying productivity potential of service providers
- However, adding more terms adds complexity and subjectivity into the TFP framework



## 2. WHAT ADDITIONAL DESIGN TERMS?

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- A number of elements would be available to service providers:
  - longer regulatory periods
  - cost pass through mechanisms
  - capital module
  - off ramps (which could also be required by the regulator)
- Service providers would be able to select a fixed or rolling X
- An efficiency carryover mechanism would not be available during a period under TFP
- The existing demand management and service incentive schemes would continue

# WHY?

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- Discretionary elements of a TFP based methodology would allow service providers to form a regulatory package that suits their circumstances
- Different elements can be balanced against each other
- However, it does result in more complexity and subjectivity
- Lack of forecasts for ECM to operate

