

**Briefing on**

**Issues and Indicative Options for**  
**the Spot Market Pricing Process**  
**and UTS Provisions**

**10 February 2009**

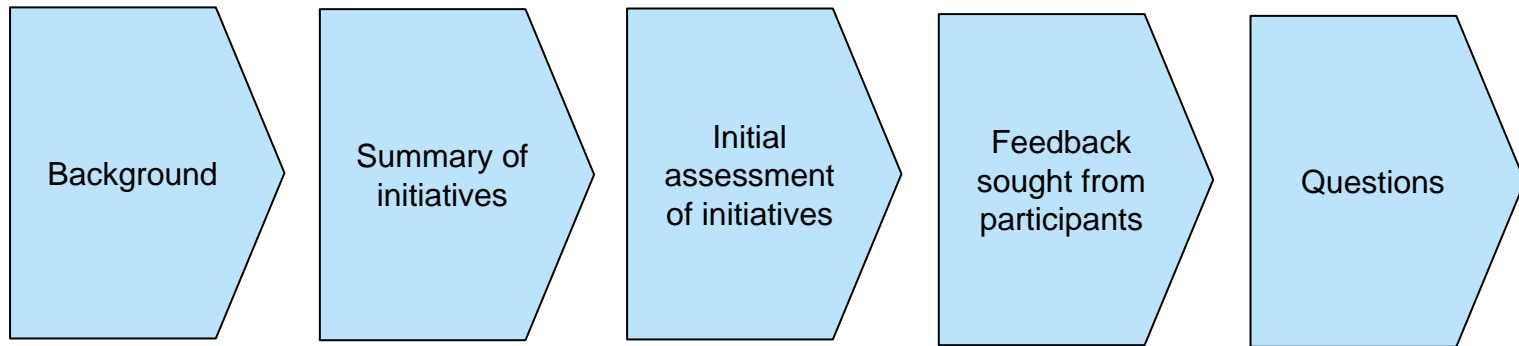
# Introduction

- ▶ Spot prices source of contention
- ▶ Pricing process not widely understood
- ▶ Aim to achieve optimal balance between desirable pricing attributes

# Purpose of briefing

- ▶ Provide information to assist with submissions
- ▶ Provide an opportunity for those intending to make submissions to discuss their ideas

# Outline of presentation



# Background

# Events leading to project

- ▶ UTS claims relating to the pricing process
- ▶ Magnitude of pricing errors and settlement claims arising from alleged breaches
- ▶ Rulings Panel comments around compensation
- ▶ Board concerns about pricing errors
- ▶ Criticism of Commission process after delays to final prices

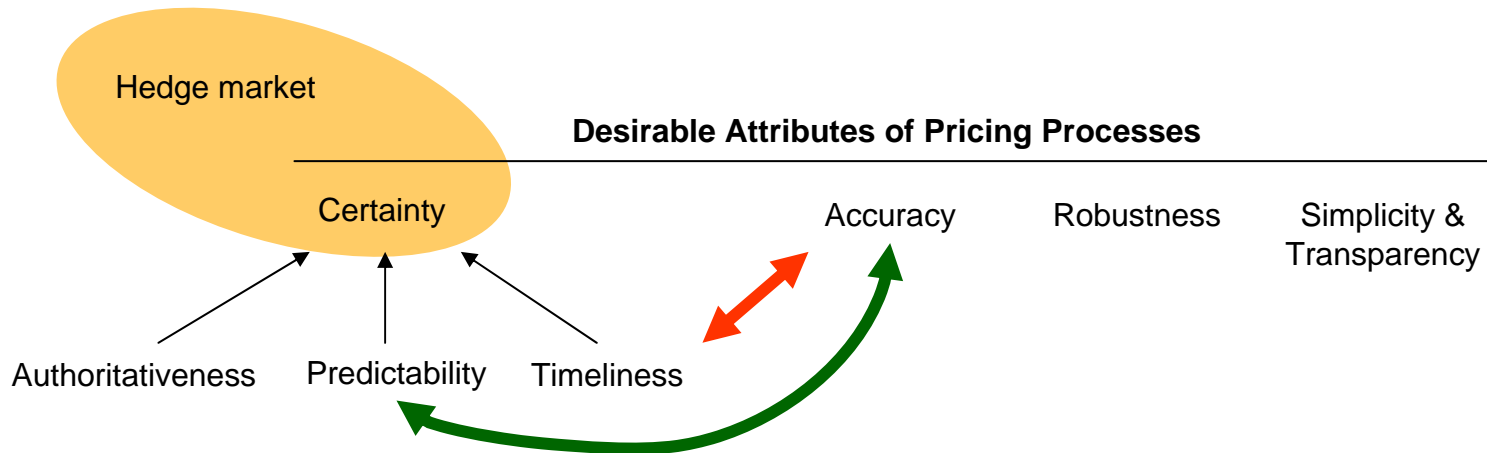
# Purpose of project

- ▶ To **improve** the current pricing process, not develop a **new** pricing process
  - » Market Design project captures the potential to develop a new pricing process, such as a day-ahead market
- ▶ To develop a conceptual framework that may extend to other Commission projects
- ▶ To facilitate the development of other Commission projects which are affected by wholesale spot prices
  - » Hedge market development
  - » Demand-side bidding and forecasting
  - » Wind generation
  - » ...and many others
- ▶ To support to the Commission's principal objectives and specific outcomes

# Project development

- ▶ Project team established to develop initiatives and options, consisting of:
  - » Commission staff and consultants
  - » Representatives of the System Operator
  - » Representatives of the Pricing Manager
- ▶ Advice from the Wholesale Market Advisory Group incorporated into the consultation paper

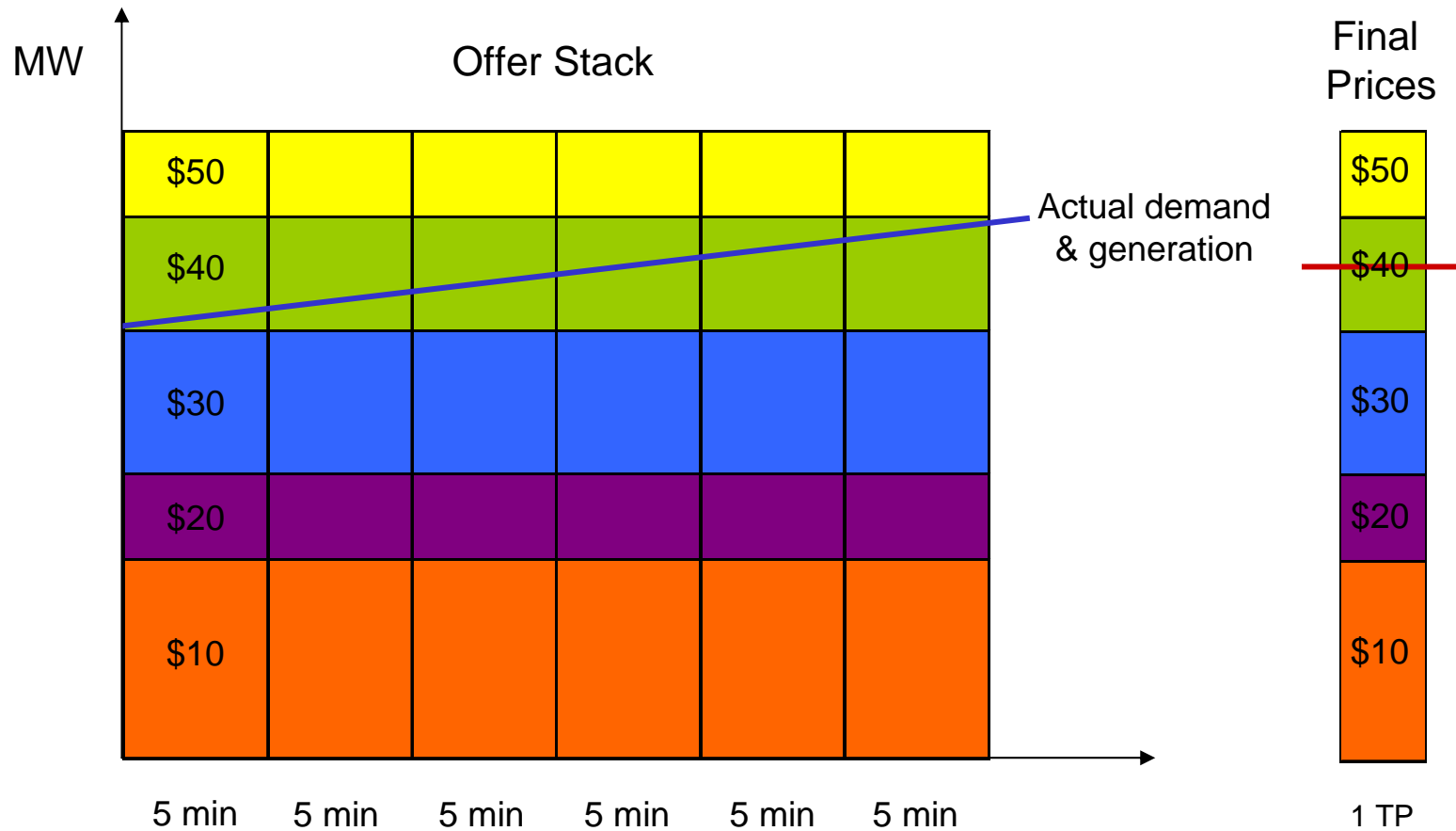
# Conceptual framework



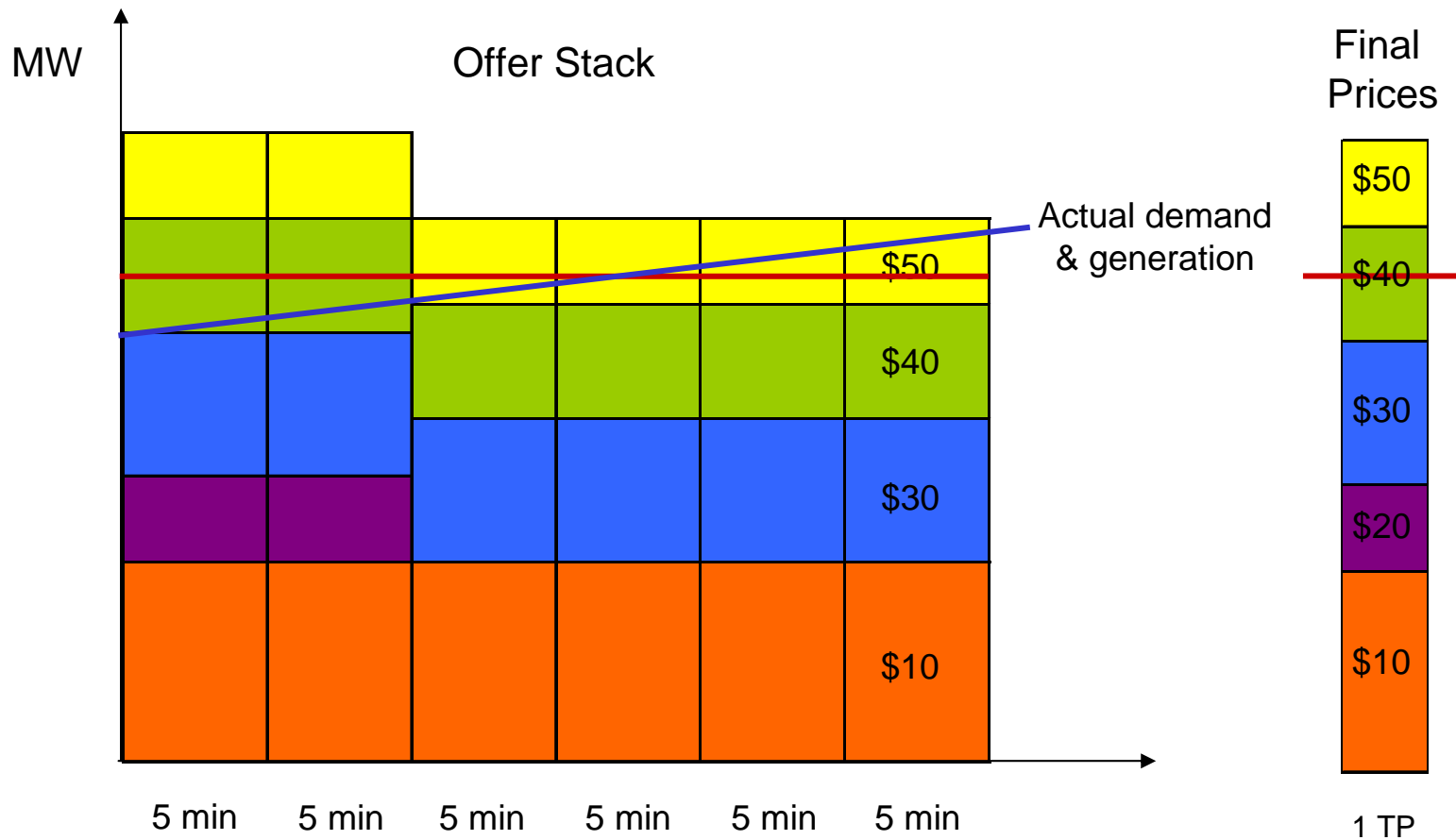
## Key Messages

- ▶ An efficient pricing process facilitates effective decision making at least cost
- ▶ Need to take into account
  - » Trade-offs between desirable pricing attributes
  - » Availability of other instruments for improving certainty e.g. hedging and DA market

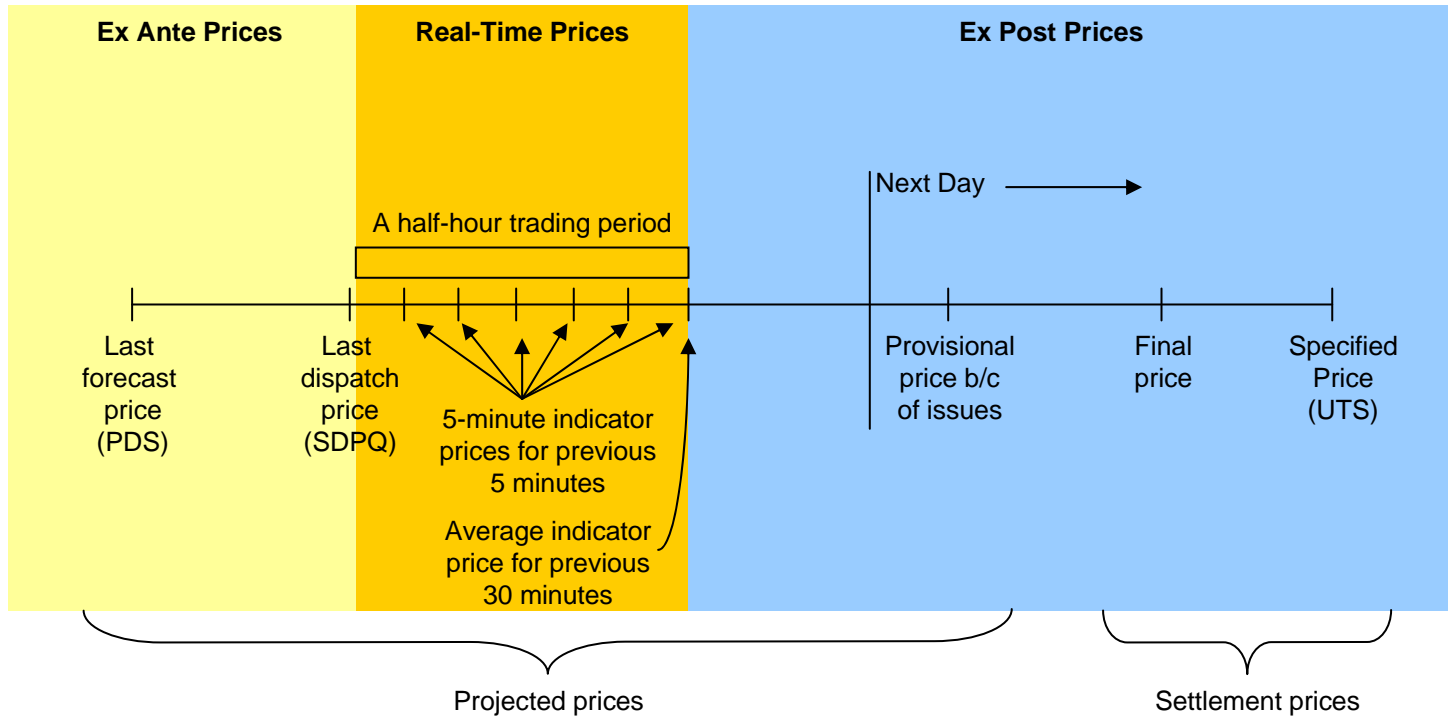
# Trading vs. 'real world' perspectives



# Real world differs from initial conditions



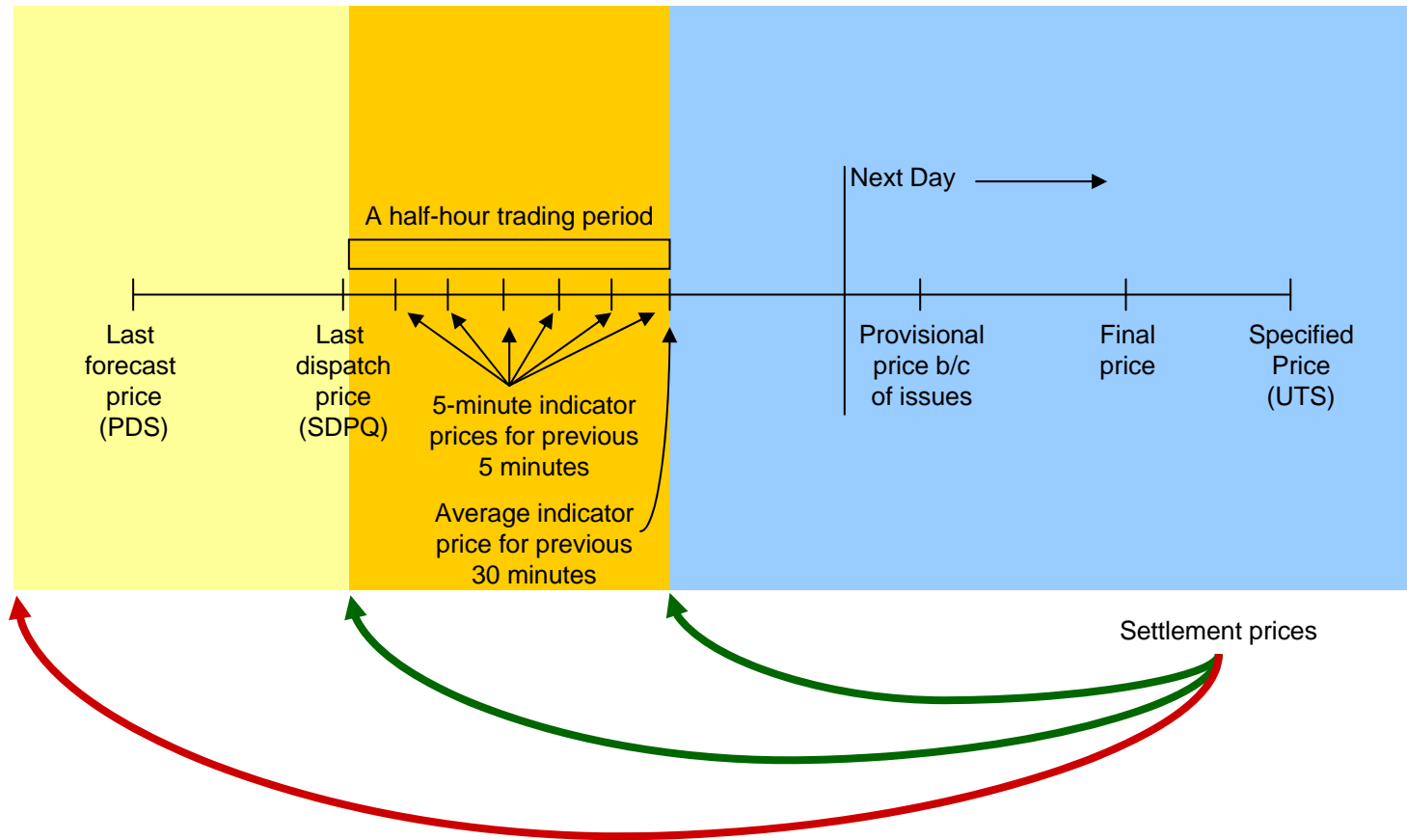
# Current pricing process



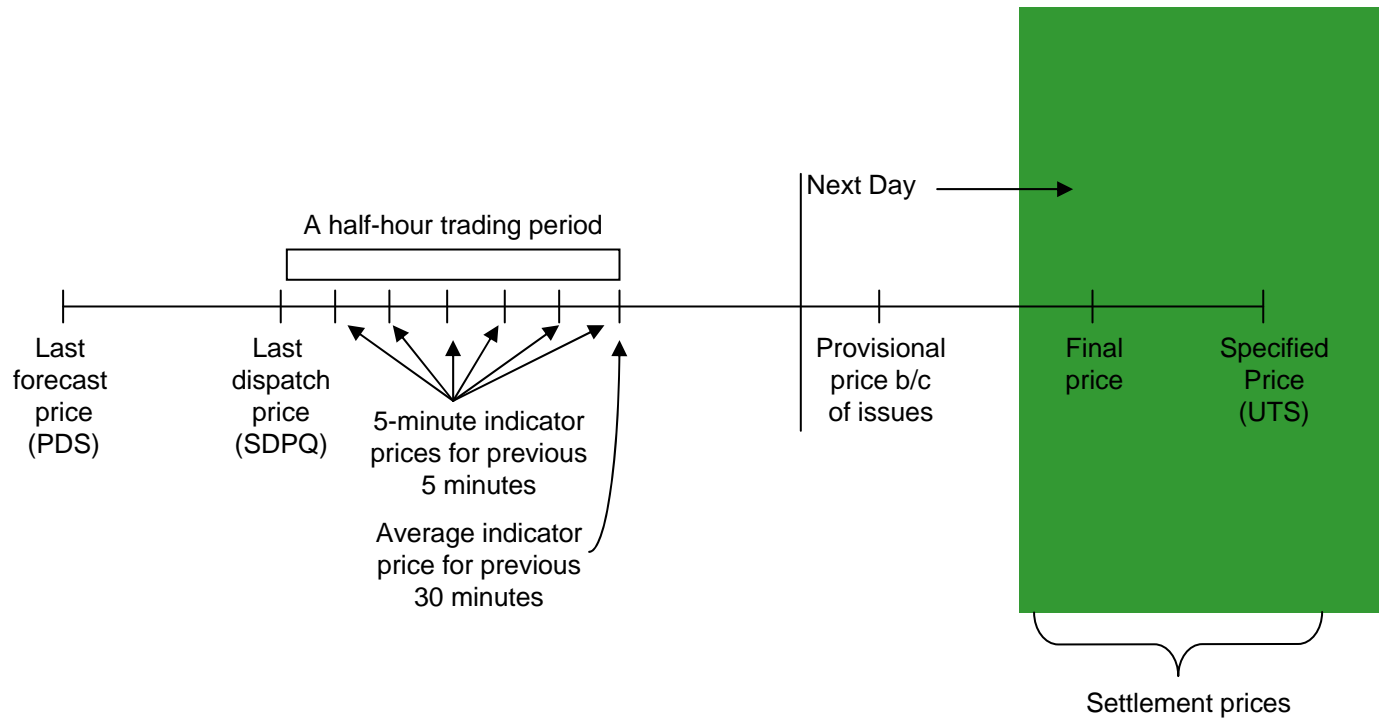
# Concerns with the current pricing process

- ▶ Lack of spot price certainty
- ▶ Inaccuracies in price forecasts
- ▶ Lack of transparency when price forecasts contain infeasibilities
- ▶ No formal process for identifying or correcting errors in pricing or dispatch processes
- ▶ Lack of clarity about the inputs into the pricing process – ‘initial conditions’ vs ‘dispatch schedule’
- ▶ Lack of clarity around the UTS provisions in the Regulations and the Rules
- ▶ Pricing process in the Rules being hard to follow

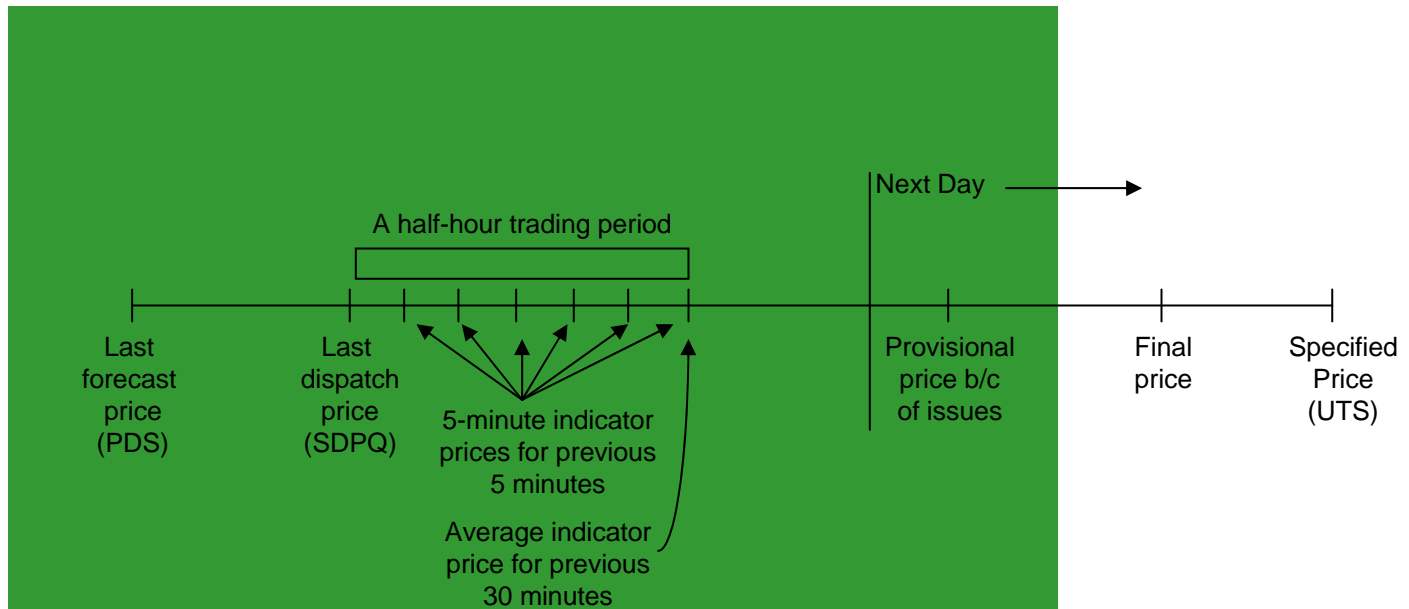
# Lever 1 - bring settlement prices forward



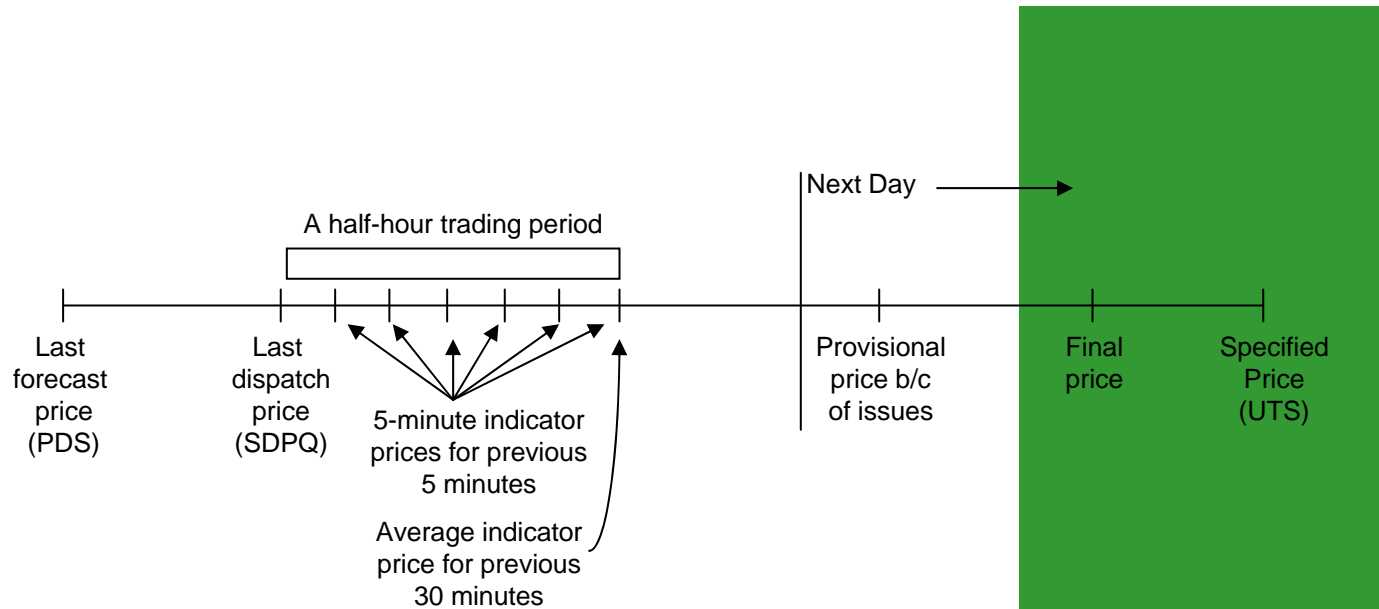
# Lever 2 – improve accuracy of settlement prices



# Lever 3 – improve accuracy of price predictions



# Lever 4 – improve clarity and consistency of pricing rules and UTS provisions

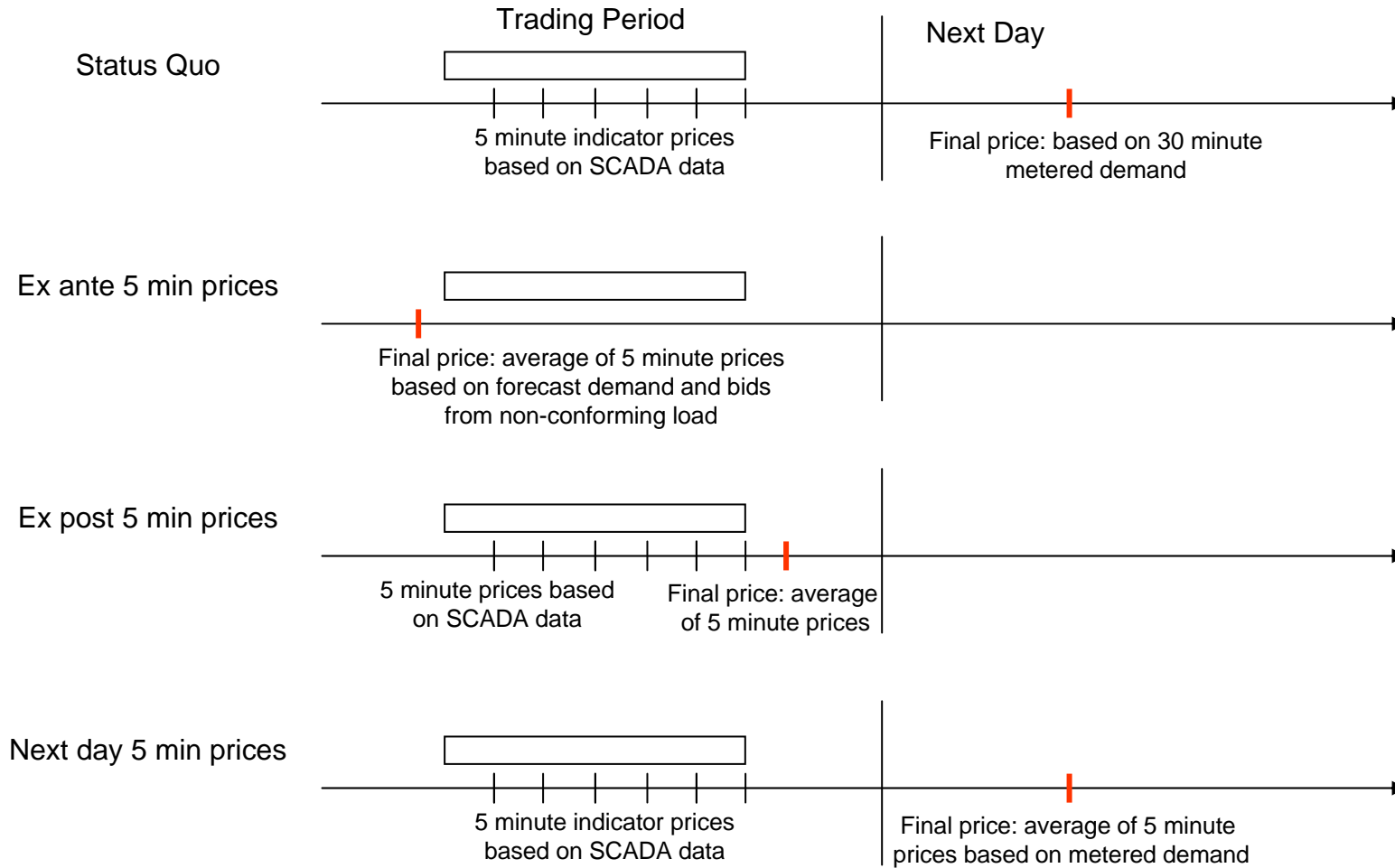


# Summary of initiatives

# Initiatives

- ▶ Settlement on 5 minute prices
- ▶ Interim pricing period
- ▶ Alignment of pricing and dispatch processes
- ▶ Accuracy of metering information
- ▶ Clarity of the pricing process
- ▶ UTS provisions

# Settlement on 5 minute prices - options



# Settlement on 5 minute prices - options

	5 minute prices based on	5 minute prices determined	30 minute final prices based on	30 minute final prices published
<b>Status quo</b>	Not used for final pricing	Not used for final pricing	30 minute metered demand	Next day
<b>Ex ante</b>	Forecast demand and bids from non-conforming load	Prior to trading period	Average of ex ante 5 minute prices	Prior to each trading period
<b>Ex post</b>	SCADA generation data to approximate load	After each 5 minute dispatch period	Average of ex post 5 minute prices	Immediately after each trading period
<b>Next day</b>	Metered demand	Next day	Average of next day 5 minute prices	Next day

# Settlement on 5 minute prices – implementation issues

## Ex ante

- ▶ Improving the accuracy of demand forecasts and bids from non-conforming load
- ▶ Resolving complex pricing issues (such as infeasibilities or high spring washer pricing situations)

## Ex post

- ▶ Improving the accuracy of SCADA generation data (used to approximate load)
- ▶ Resolving complex pricing issues (such as those leading to provisional pricing situations)
- ▶ Addressing technical limitations (such as transparency of infeasibilities in forecast prices and unavailable prices due to SCADA outages)

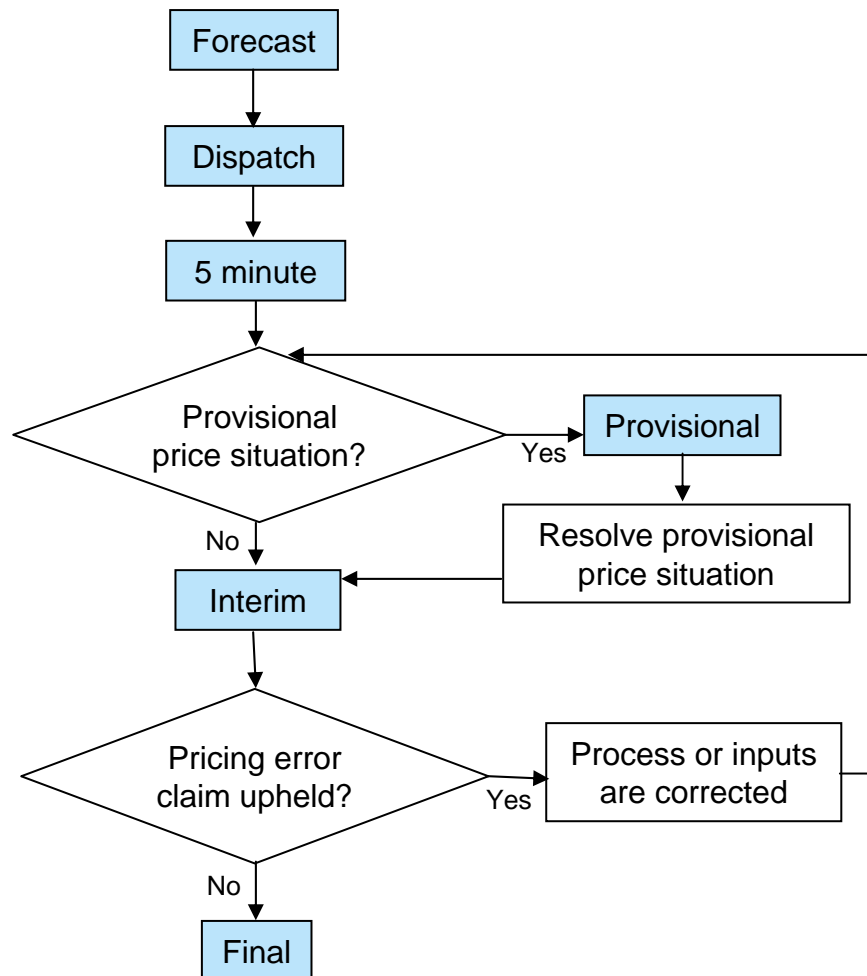
## Next day

- ▶ Obtaining revenue meter quality load data in 5 minute segments

# Interim pricing period

## Types of errors to be corrected

- ▶ Incorrect input affecting final prices but not forecast prices
- ▶ Incorrect process used in calculating final prices
- ▶ Metering estimation producing an error in final prices



# Alignment of pricing and dispatch processes

Pricing inputs based on	Most closely aligns the inputs for pricing with actual dispatch when
Initial conditions	there is a significant delay before a dispatch schedule is produced
Dispatch solution	there is no significant delay before a dispatch schedule is produced
Initial conditions or a dispatch schedule, depending on circumstances	Can vary basis for pricing inputs depending on which options most closely aligns pricing with dispatch

# Accuracy of metering information

## Metering situation trigger

- ▶ Require the annual consumption list to be updated and published monthly; and/or
- ▶ Tighten the thresholds for declaring a metering situation

## Data estimation (initial estimate)

- ▶ Allow the grid owner to use a reasonable estimate based on previous demand for that trading period if information for the equivalent day is unrepresentative; and
- ▶ Require an initial estimate to be provided when data is incorrect

## Obligations for providing metering information

- ▶ Remove the requirement for generators to provide metering information to the Pricing Manager

## Intermittent generator offers

- ▶ Use metered data from intermittent generators as an offer in SPD

# Clarity of the pricing process

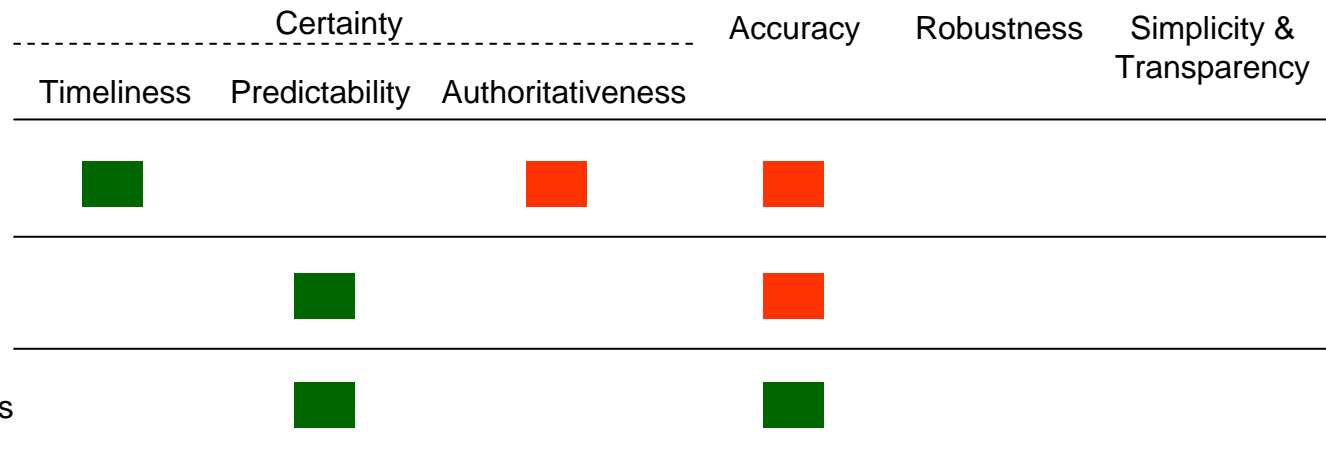
- ▶ Publish document describing the system operator's process for resolving infeasibilities and high spring washer price situations
- ▶ Publish a table (or a link to a table) outlining the sources of the pricing inputs
- ▶ Redraft the pricing rules

# UTS provisions

- ▶ Clarify the criteria for determining a UTS
- ▶ Review whether the process by which the Commission deals with UTS claims is appropriate
- ▶ Review whether the UTS remedies are effective and appropriate
- ▶ Resolve the tension between the regulations and rules which govern the republication of final prices
- ▶ Review whether the compensation and penalties provisions are effective and appropriate

# Initial assessment of initiatives

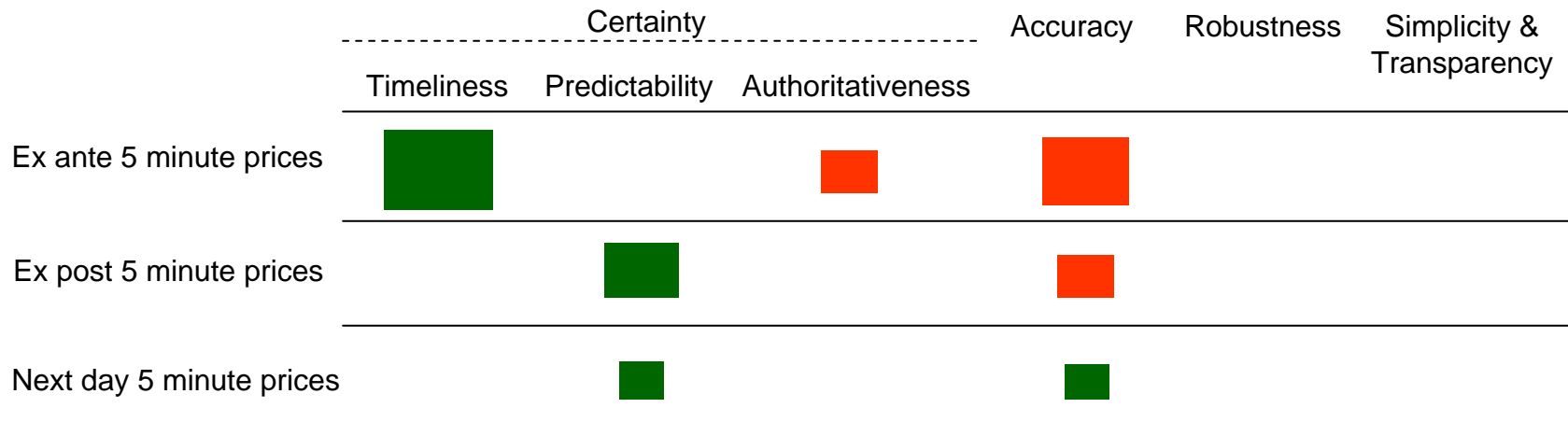
# Impact on desirable attributes of settlement on 5 minute prices



## Key

- Positive impact
- Negative impact
- Ambiguous impact or unsure

# Impact on desirable attributes of settlement on 5 minute prices



- The magnitude of the impact on desirable attributes varies greatly across the options
- Costs also vary greatly across the options

# Impact of other initiatives on pricing attributes

	Certainty			Accuracy	Robustness	Simplicity & Transparency
	Timeliness	Predictability	Authoritativeness			
Interim pricing period	Red	Green	Orange	Green		Green
Alignment of pricing and dispatch processes			Green	Red		
Accuracy of metering information		Green	Red	Green		Green
Clarifying the Pricing process			Green			Green
Clarifying UTS provisions			Green	Green		Green

# Prioritising the initiatives

- ▶ Impact on pricing attributes (calculated a score for each initiative)
- ▶ Costs, practicality and timeframe for implementation
- ▶ Level of certainty about aggregate score

# Order of priority

1. Clarifying UTS provisions
2. Clarifying the pricing process
3. Interim pricing period
4. Improving accuracy of metering information
5. Alignment of pricing and dispatch processes
6. Settlement on 5 minute prices

# Next steps

- |   |                  |
|---|------------------|
| ▶ Submissions due   | 20 February      |
| ▶ Commission to consider submissions  | February – March |
| ▶ Commission to develop initiatives further (including detailed cost benefit analysis), starting with those of highest priority | March onwards    |
| ▶ Information documents to be published   | March - April    |
| ▶ Commission to consult on detailed rule changes (and/or regulation changes)  | April onwards    |

# Feedback sought from participants

# Feedback sought from participants in submissions

- ▶ Materiality of issues
- ▶ Conceptual framework
- ▶ Priorities of initiatives
- ▶ Potential costs and benefits of initiatives
- ▶ Implementation issues
- ▶ UTS provisions

# Questions