

National Frequency Keeping Market

WAG Meeting

20 February 2014

Outline

- ❑ Recap from the last WAG meeting
- ❑ Project approaches
- ❑ Key components of WAG papers
- ❑ Feedback from the WAG

Recap from the last meeting

- ❑ Scope of investigations now confirmed
- ❑ System operator engaged through the TASC agreement to investigate the physical arrangements for national frequency keeping
- ❑ Key options being investigated are:
 - selection in SPD, allowing full co-optimisation
 - selection in a replacement independent solver
- ❑ New Code enabling provisions needed, discussed in more detail in later slides
- ❑ Cost allocation review work should be advanced in the next update of the WAG's work programme

Project approaches

- ❑ The WAG decided to use a 'direct to recommendations' approach with the EA for the national IR market
- ❑ The same approach could be used for national FK - the two projects have similarities
- ❑ One added dimension for national FK is that there is the need to create new Code enabling provisions

Procurement arrangements

- ❑ The current FK provisions are contained almost entirely in the procurement plan and the ancillary services contract – a legacy of 1-year procurement contracts used prior to 2004
- ❑ Part 13 is silent on FK other than in respect of constrained on and off payments, and dispatch instructions
- ❑ For consistency with the other half-hour markets, FK could be migrated to part 13, covering:
 - real time FK pricing
 - offer form and offer process
 - the FK component of the dispatch objective function

Code enabling provisions - options

Part 13 Option

More formal arrangement,
forms part of the main body of
the Code

Consistency with the other
half-hour markets, energy and
reserves

Service provider obligations
for the offer process, pricing
and publication codified in
detail

Directly administered by the
Electricity Authority

Procurement Plan Option

Less formal, the PP is the
system operator's document,
incorporated by reference

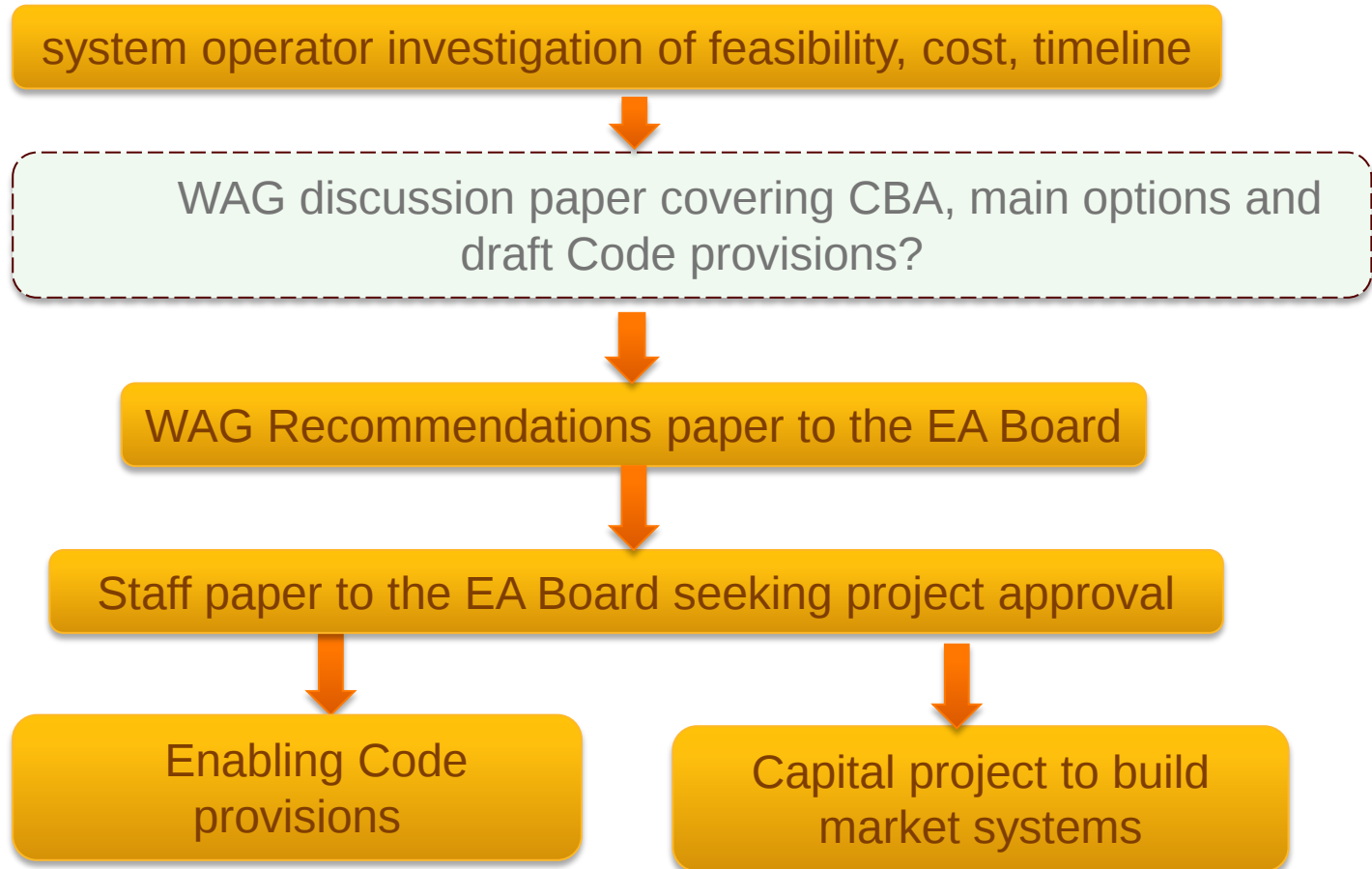
Greater flexibility – the PP is
updated biennially

Possible to split requirements
between the PP and ancillary
services contracts

Code enabling provisions

- ❑ The option to move all of the FK provisions into part 13 of the Code is a reasonably significant change to the structure of the Code
- ❑ Similar changes are not required for enabling a national IR market, most of the provisions are already in part 13
- ❑ If this option was preferred, then it may be appropriate for the WAG to issue a discussion paper prior to making recommendations to the Board (see the project approach below)

Project approach



Discussion or recommendations paper

- The discussion paper or recommendations paper would include the following sections:
 - output from the system operator's investigations
 - selection options
 - procurement arrangements
 - timeframe
 - benefits
 - costs
 - dependencies with under frequency management projects
 - recommendations

Investigations

- ❑ Output from the system operator's investigations covering:
 - strawman design options
 - Identified changes to Transpower and NZX market systems
 - integration with other projects

Procurement arrangements

- ❑ Assuming selection and co-optimisation are feasible in SPD:
 - procurement through a half-hour market, 5 minute dispatch
 - Market-clearing price with two nodes, one NI and one SI
 - offers in \$/MW, possibly in several MW tranches
 - Payment in \$/MWh – same as energy and IR t
 - part bands able to be cleared
 - fan offer form proposed
 - options limited by the existing market systems

Timeframe and cost/benefit

- ❑ Cost/benefits and timeframes expected to be available by 31 May 2014
- ❑ Benefits expected from:
 - Increased competition by allowing procurement of frequency keeping from the least cost source at a national level
 - Reducing the quantity of frequency keeping required by making use of quantity diversity between islands
 - Co-optimising the scheduling of energy, reserves and frequency keeping

Dependencies

- ☐ MFK project
- ☐ National IR market
- ☐ HVDC round power
- ☐ HVDC FKC
- ☐ Other projects making changes to SPD and RMT such as the UFM initiatives

WAG feedback

Feedback from the WAG is requested on the following:

- ☐ Which of the Code enabling provision options is preferred
- ☐ Comment on the suggested structure of the discussion or recommendations paper
- ☐ Comments on the next steps which are proposed to be:
 - Completion of investigation of physical arrangements by the system operator
 - Preparation of a CBA using vSPD model for benefits and system operator's cost estimates
 - Drafting of the enabling Code provisions for a frequency keeping market