



**Retention or revocation of the declaration of raise
contingency Frequency Control Ancillary Services
(FCAS) as a declared electrical service**

Consultation Paper

April 2015

Printed April 2015
Office of the Tasmanian Economic Regulator
Level 3, 21 Murray Street, Hobart TAS 7000
GPO Box 770, Hobart TAS 7001
Phone: (03) 6166 4422 Fax (03) 6233 5666

ISBN 978-0-7246-5360-7

Copyright
© Office of the Tasmanian Economic Regulator

INVITATION TO MAKE SUBMISSIONS

In response to concerns raised in 2009 about Hydro Tasmania's dominance of the Tasmanian energy generation market, the Regulator declared raise contingency Frequency Control Ancillary Services (FCAS) to be a declared electrical service on 3 February 2010 and subsequently conducted an FCAS investigation and made an FCAS price determination, the 2011 FCAS Price Determination. This determination will expire on 31 January 2016.

Prior to the expiry of a declared services price determination the Regulator is required to invite submissions on whether the declaration of the declared electrical service should be retained or revoked.

The Regulator has prepared this Consultation Paper providing details about the existing declaration, together with the Regulator's conclusions about whether the declaration should be retained or revoked. This Consultation Paper is designed to assist interested parties in making submissions on this matter.

As occurred prior to the Regulator making the existing declaration, Hydro Tasmania has provided a preliminary submission setting out its views on whether the existing declaration should be retained or revoked. A copy of Hydro Tasmania's submission is available on the Regulator's website: www.economicregulator.tas.gov.au.

It is the Regulator's policy to publish all submissions on the Office of the Tasmanian Economic Regulator's (OTTER) website unless the author of the submission requests confidentiality in relation to the submission (or any part of the submission). Those parts of a submission that are requested to be confidential should be submitted as an attachment to that part suitable for publication.

The Regulator will not publish submissions which contain material that the Regulator believes is, or could be, derogatory or defamatory.

Submissions should be received by close of business on 15 May 2015.

To facilitate the publication of submission on OTTER's website, submissions by email are preferred. Submissions and enquires may be made to:

office@economicregulator.tas.gov.au

or to

Todd Newett, Principal Policy Analyst
Office of the Tasmanian Economic Regulator
GPO Box 770,
Hobart 7001
Telephone: 03 6166 4422
Facsimile: 03 6233 5666

A copy of this Consultation Paper is also available on the Tasmanian Economic Regulator's website: www.economicregulator.tas.gov.au.

Following consideration of submissions, the Regulator will decide whether to retain or revoke the existing declaration of raise contingency FCAS. Details of the Regulator's decision will be published on the Regulator's website.

TABLE OF CONTENTS

1	BACKGROUND	1
2	FREQUENCY CONTROL ANCILLARY SERVICES.....	5
2.1	OVERVIEW.....	5
2.2	FCAS PRICING	6
3	REVIEWING THE EXISTING DECLARATION OF DECLARED ELECTRICAL SERVICES	7
3.1	SUBSTANTIAL MARKET POWER	7
3.2	PROMOTION OF COMPETITION	9
3.3	PROMOTION OF EFFICIENCY	10
3.4	PROMOTION OF THE PUBLIC INTEREST.....	11
4	REGULATOR'S CONCLUSIONS AND PROPOSAL.....	13
5	NEXT STEPS.....	14

GLOSSARY OF TERMS

Term	Meaning
AEMC	Australian Energy Market Commission
AEMO	Australian Energy Market Operator
Delayed raise contingency FCAS	five minute raise contingency FCAS
ESI Act	<i>Electricity Supply Industry Act 1995</i>
Fast raise contingency FCAS	six second raise contingency FCAS
FCAS	frequency control ancillary services
Hydro Tasmania	The trading name of the Hydro-Electric Corporation
Market generator	Generator registered as such under the NER
NEM	National Electricity Market
NER	National Electricity Rules
Price Control Regulations	<i>Electricity Supply Industry (Price Control) Regulations 2003</i>
Pricing and Related Matters Regulations	<i>Electricity Supply Industry (Pricing and Related Matters) Regulations 2013</i>
Regulator	Tasmanian Economic Regulator who is the regulator for the purposes of the ESI Act
Slow raise contingency FCAS	sixty second raise contingency FCAS
TVPS	Tamar Valley Power Station

1 BACKGROUND

The Australian Energy Market Operator (AEMO) is responsible for controlling the frequency of the Tasmanian power system within the Tasmanian frequency operating standards. To do this, it purchases FCAS from National Electricity Market (NEM) participants in eight distinct spot markets for FCAS, which include three raise contingency FCAS spot markets. Participants must register with AEMO for each of the eight FCAS markets in which they wish to provide their services.

Raise contingency FCAS are supplied in the Tasmanian region of the NEM by registered service providers which comprise Hydro Tasmania (the only registered provider of raise contingency FCAS in Tasmania) and mainland suppliers through the frequency control facility provided by Basslink. In certain circumstances, transmission of the required raise contingency FCAS over Basslink is not possible. It must, therefore, be sourced from within the Tasmanian region, ie from Hydro Tasmania.

The costs of raise contingency FCAS in the NEM are met nationally by market generators in proportion to the energy they generate during the relevant five minute dispatch interval of the market. However, where local regional requirements determine the cost of the local services, all generators in the Tasmanian region bear the costs in proportion to their output during the relevant period. Hydro Tasmania, as the sole registered provider of these services in the Tasmanian region, receives these payments.

In the lead up to FCAS being a declared electrical service, the Regulator noted that through high pricing of blocks of its energy, Hydro Tasmania could ensure that Basslink imported cheaper electricity from Victoria to Tasmania. When Basslink was importing at or close to its limit, Hydro Tasmania, as the only source of raise contingency FCAS in the Tasmanian region, could (and had) bid its FCAS at such high levels that competing Tasmanian generators could be liable for FCAS costs that exceed the revenue they receive from generating electricity. These generators were therefore compelled in the short-term to curtail their generation; shut down; hedge their exposure with the sole provider and price setter, Hydro Tasmania, or seek higher prices for their energy, which would inevitably translate into higher prices paid by Tasmanian customers. Hydro Tasmania's ability to set raise contingency FCAS prices in the Tasmanian region at any level it so chooses and exercise control through its energy and FCAS bidding behaviour, could therefore deter new generators from entering the Tasmanian energy market.

In April 2009, the Australian Energy Regulator reported significantly high prices in all three raise contingency FCAS markets in Tasmania for the first three weeks of April 2009.¹ The high pricing of these services also generated complaints from other

¹ Weekly market analysis reports of April 2009, published by the Australian Energy Regulator.

Tasmanian generators with claims that Hydro Tasmania's substantial market power in the supply of these services was negatively impacting on competition in the Tasmanian electricity generation market.

On 4 January 2010, the Regulator announced its decision to declare as "declared electrical services" the following services supplied by Hydro Tasmania to meet local Tasmanian requirements:

- fast raise contingency frequency control ancillary service;
- slow raise contingency frequency control ancillary service; and
- delayed raise contingency frequency control ancillary service.

The existing declaration of raise contingency FCAS as a declared electrical service was made under Regulation 19 of the *Electricity Supply Industry (Price Control) Regulations 2003* (the 2003 Price Control Regulations). Under this Regulation, the Regulator had the power to declare a good or service provided by an electricity entity to be a declared electrical service if the Regulator was of the opinion that –

- (a) the electricity entity has substantial market power in respect of that good or service; and
- (b) the promotion of competition, efficiency or the public interest requires the making of that declaration.

Where an entity has substantial market power in the relevant market, it has the ability to charge higher prices, and/or provide a lower level of quality for the good or service than would be provided by a competitive market. Without the discipline of competition or regulation, a misallocation of resources may result since prices no longer reflect the underlying economic efficient costs. In these circumstances, economic regulation may be applied to promote efficiency, to protect the public interest and promote competition in upstream and downstream markets.

Under Regulation 19 of the 2003 Price Control Regulations, the possession of substantial market power of itself was insufficient to justify the declaration of a service ie the Regulator also had to be satisfied the declaration was required to promote competition, efficiency or the public interest.

The Regulator decided that Hydro Tasmania had substantial market power in the supply of raise contingency FCAS in the Tasmanian region and that the promotion of competition, efficiency and the public interest required these services to be declared by the Regulator as declared electrical services.

The declaration took effect on 3 February 2010. Further information on the existing declaration can be found on the Regulator's website: www.economicregulator.tas.gov.au (Electricity>Retail Pricing>Pricing Investigations and Determinations>2010 Investigations>2010 FCAS Investigation).

Following the declaration of the services, the Regulator gave notice on 4 March 2010 of the commencement of the investigation into Hydro Tasmania's

pricing policies in respect of the declared electrical services and consulted on terms of reference for the investigation.

Following the investigation, the Regulator made a determination (the 2011 FCAS Price Determination) which was effective from 1 February 2011. This determination will expire on 31 January 2016.

In accordance with Regulation 35 of the *Electricity Supply Industry (Pricing and Related Matters) Regulations 2013* the Regulator is required, to invite submissions on whether the declaration of FCAS as a declared electrical service should be retained or revoked.

2 FREQUENCY CONTROL ANCILLARY SERVICES

This section provides an overview of FCAS. More detailed information about the provision of FCAS in the Tasmanian context is available in section 2 of the Regulator's July 2009 Issues Paper, *Notice of intention to declare the supply of raise contingency frequency control ancillary services by Hydro Tasmania as a declared electrical service* (available on the Regulator's website at: www.economicregulator.tas.gov.au).

2.1 Overview

FCAS are required to maintain the frequency of the power system within frequency operating standards determined by the Australian Energy Market Commission (AEMC). An amount of FCAS must be purchased by AEMO in each of eight exclusive FCAS markets. These FCAS are classified as follows:

- *Regulation FCAS* are services that are employed to ensure that continual minor frequency deviations during typical load and generation variations are maintained within the normal operating band.²
- *Contingency FCAS* are fast, slow and delayed services used for recovering larger frequency deviations that have arisen from contingent events such as the loss of a generating unit or transmission line.
 - fast services provide a fast acting response to arrest frequency deviations within the first six seconds of a contingent event;
 - slow services provide a slower acting response to stabilise frequency deviations within 60 seconds of the event; and
 - delayed services provide further stability to the system by returning the frequency to the normal operating band within five minutes.

As the frequency may need to be adjusted up or down, each of these four FCAS can be further categorised as 'raise' or 'lower' services.

The subject of this paper is the raise contingency FCAS which are required to be available to correct the frequency if a contingency event results in a decrease in frequency.

² The normal operating band is the range in which frequency deviations, which occur during typical load and generation variations, are tolerated as it is not realistic to maintain a constant frequency of 50 Hz.

Contingency events which may influence the requirements for contingency raise FCAS in Tasmania include tripping of the largest generating unit; a single transmission line circuit; and/or Basslink. The amounts required are usually determined by the amount of power which is tripped off, the load on the power system and the inertia of the power system.

For the purposes of this Consultation Paper, the three raise contingency FCAS are denoted as fast, slow and delayed raise contingency FCAS.

Contingency FCAS in the NEM are recovered from market participants (generators or customers) on a user pays basis. The cost of raise contingency FCAS requirements are recovered from market generators in proportion to the energy they generate in the relevant five minute dispatch interval. The costs of lower contingency FCAS are met by market customers in proportion to their energy consumption in the relevant half hour trading interval.

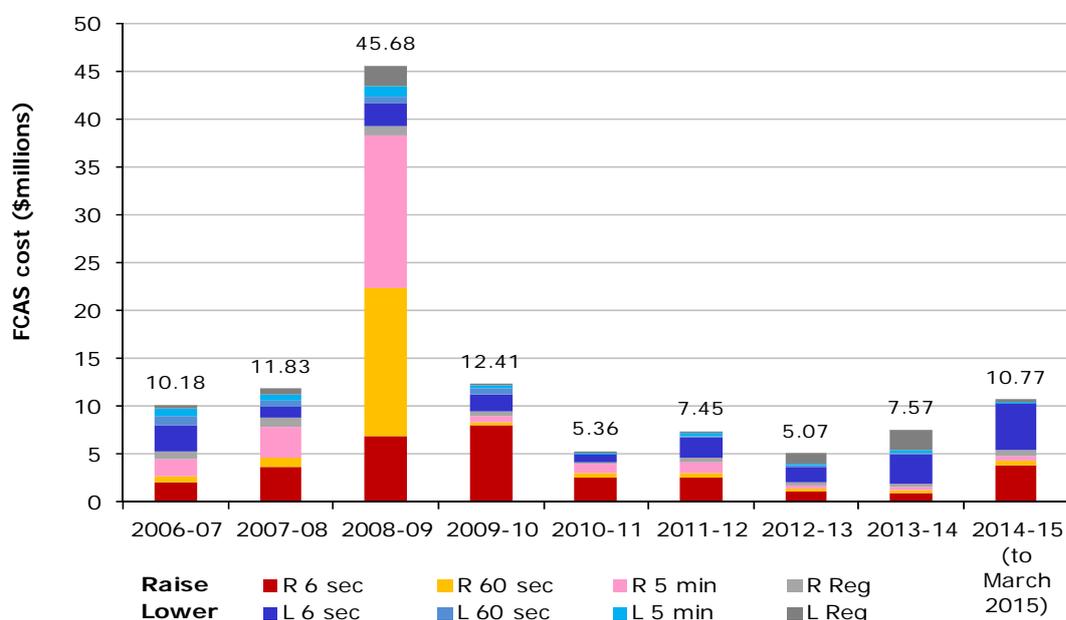
In 2010 the Regulator declared all three raise contingency FCAS as declared electrical services.

2.2 FCAS pricing

Figure 2.1 shows total annual FCAS costs in Tasmania for the 2014-15 financial year to date (up until March 2015) compared to the previous eight financial years. As can be seen from the chart, FCAS pricing after regulation of the market commenced in February 2011 has been relatively stable, with prices generally being lower than they were in 2006-07 and 2007-08. Importantly there haven't been any significant price spikes since 2008-09.

Whilst FCAS prices have been somewhat higher for 2014-15 (especially considering the 2014-15 data covers nine months only), this is due to price spikes for lower FCAS caused by Basslink tripping out of service on 10 December 2014 and 16 December 2014 after lightning strikes on transmission lines in Tasmania.

Figure 2.1: FCAS pricing – 1 July 2006 to 31 March 2015



3 REVIEWING THE EXISTING DECLARATION OF DECLARED ELECTRICAL SERVICES

Regulation 35 of the *Electricity Supply Industry (Pricing and Related Matters Regulations 2013)* (the 2013 Pricing and Related Matters Regulations)³ requires the Regulator to review an existing electrical services declaration and invite submissions at least six months before the expiry date of a declared electrical service price determination ie on or before 31 July 2015.

The Regulator has reviewed the retention or revocation of the existing declaration in terms of the tests applied in deciding whether to declare the services in the first place (Hydro Tasmania has also based its preliminary submission on those tests).

The following sections set out the Regulator's deliberations on whether to retain or revoke the existing declaration together with details of Hydro Tasmania's preliminary submission and the Regulator's responses and conclusions.

3.1 Substantial market power

Markets are the primary and preferred mechanism for the provision of goods and services. The objectives of regulation include the prevention or limit of the abuse of market power. Substantial market power needs to be considered from the perspective of both consumers and of actual or potential market competitors.

The courts have often looked to market share to determine the degree of market power. However, a large market share does not necessarily mean that there is a substantial degree of market power. The ease with which competitors are able to enter the market needs also to be considered.

This was expressed in *Eastern Express Pty Ltd v General Newspapers Pty Ltd (1992)*⁴ where it was stated that:

Market power is concerned with power which enables a corporation to behave independently of competition and of competitive forces in a relevant market.

The primary consideration in determining market power must be taken to be whether there are barriers to entry into the relevant market.... To what extent is it rational or possible for new entrants to enter the market?

³ The 2013 Pricing and Related Matters Regulations replaced the 2012 Pricing and Related Matters Regulations on 1 June 2013 with the *Electricity Supply Industry (Pricing and Related Matters Regulations 2013)* having previously replaced the 2003 Price Control Regulations.

⁴ *Eastern Express Pty Ltd v General Newspapers Pty Ltd (1992)* 35 FCR 43, per Lockhart and Gummow JJ.

The word 'substantial' imports a 'greater rather than less' degree of power.

In *Dowling v Dalgety Australia Ltd (1992)*⁵ the following major factors were taken into account in identifying market power:

- the ability of a firm to raise prices above the supply cost (the minimum cost an efficient firm would incur in producing the good) without rivals taking away customers in due time;
- the extent to which the firm's conduct in the market is constrained by that of competitors or potential competitors;
- the market share of the firm, although this alone is not generally determinative of market power;
- the existence of vertical integration, although this alone is not generally determinative of market power; and
- the extent to which it is rational or possible for new entrants to enter the market ie the extent of barriers to entry.

In summary, substantial market power will be said to exist when:

- there is ineffective or no competition such that the entity can raise prices or lower service standards without detriment to its business; and
- the existence of actual competitors or potential competitors does not work to reduce prices to levels that reflect their economic cost or improve services to meet customer value expectations.

To be able to demonstrate the existence of (or lack of) market power and the existence or otherwise of effective competition, the relevant market must also be defined.⁶ The definition of the market is important, as too narrow a definition of market may result in an appearance of more market power than actually exists, too broad a definition may create the appearance of less market power than actually exists. Important factors in defining a relevant market include the geographical boundary within which the alternative services are available and the period of time necessary for an effective competitor to enter the market.

In Hydro Tasmania's preliminary submission, it argues that raise contingency FCAS could be made available via eligible market bids from a variety of sources, including registered generators, registered customer loads and other standalone technologies registered to provide equivalent mitigation (such as flywheels).

In this regard Hydro Tasmania notes that in Tasmania there are several large loads that could be registered to provide raise FCAS for generator contingencies and that

⁵ *Dowling v Dalgety Australia Ltd (1992)* 34 FCR 109, per Lockhart J.

⁶ *Queensland Wire Industries Pty Ltd v Broken Hill Pty Co Ltd (1989)* 167 CLR 177.

other providers could participate if they desired to do so. Hydro Tasmania believes that the lack of participation from other providers is due to a lack of value in the market ie the prices ordinarily paid for FCAS provide little incentive to do so and this has therefore not happened to date.

The Regulator considered Hydro Tasmania's preliminary submission and notes that Hydro Tasmania is the sole registered provider of raise contingency FCAS in the Tasmanian region. When Basslink is not importing at or close to its limits or within its "no-go" zone, Hydro Tasmania is competing globally with other generators on the mainland for the provision of FCAS. However, when Basslink is importing at its limits, switching between import and export, or has tripped, all raise contingency FCAS are provided by Hydro Tasmania. Moreover when Basslink is importing, the local raise contingency FCAS requirements to cater for a Basslink trip must be provided locally by Hydro Tasmania. In the absence of competitive forces, Hydro Tasmania can, therefore, price its services in Tasmania as it sees fit.

As noted earlier, a firm can be said to have market power where it is not rational or possible for new entrants to participate in the market. The Regulator must, therefore, consider whether it is possible, and rational, for market participants to enter the market and provide raise contingency FCAS.

Wind generators are unable to supply raise contingency FCAS. Whilst gas peaking plant in theory can provide raise contingency FCAS, there is not a 1:1 linear relationship between the reduction in generation capacity and the provision of raise FCAS. In the current market environment, it therefore appears unlikely that a current or potential new entrant to the Tasmanian generation sector would be willing, or physically able, to offer raise contingency FCAS to an extent that would eliminate Hydro Tasmania's market power in the provision of these services.

In addition, the existence of actual or potentially high priced raise contingency FCAS may be a deterrent to any new generator entering the market. Significant costs incurred in setting up to provide FCAS or to modify generators to produce it in sufficient quantities to limit or reduce its exposure may result in either potential owners not being willing to enter the market, or only being willing to enter at a significant discount against construction costs.

Further, the transfer of TVPS to Hydro Tasmania on 1 June 2013 has further increased Hydro Tasmania's dominance in the Tasmanian generation and FCAS markets.

Taking into account these factors, the Regulator has concluded that Hydro Tasmania has significant market power in providing raise contingency FCAS in Tasmania.

3.2 Promotion of competition

Prior to making the existing declaration, the Regulator noted that it considered that regulation of the price for raise contingency FCAS would provide sufficient assurance to new generators that they are paying economically efficient prices for

these services, which may lead to increased competition in the energy market ie it would promote competition in the complementary energy market. With new entrant generators, it may also lead, in the longer term, to competition in the Tasmanian FCAS market. Competition in both the energy and FCAS markets should result in economically efficient prices in these markets, promoting competition in downstream markets as well.

However, the Regulator notes that the existing declaration has not lead to an increase in competition in the energy market. Since making the existing declaration there have not been any new generators capable of entering the Tasmanian FCAS market. The Regulator notes that competition in the Tasmanian energy generation market has decreased with the transfer of TVPS to Hydro Tasmania on 1 June 2013. Hydro Tasmania's preliminary submission also notes that several participants who made submissions as part of the previous declaration process noted at that time that they could not continue to operate in a market which presented such risk as high raise FCAS prices. However, to date, none of these parties subsequently bought regulated FCAS hedges and have chosen instead to take the risk of high spot prices.

The Regulator considers that the existing FCAS declaration has not promoted competition in the energy market in any meaningful way and that there is no reason to believe that retaining the declaration into the future will change this outcome.

3.3 Promotion of efficiency

In a competitive market, efficiency is promoted through the allocation of resources to the lowest cost/highest value good or service and maximises the overall value to society of the value of goods and services produced ie competitive markets drive productive, allocative and dynamic efficiency.

Regulation, can, through the setting of maximum prices to levels commensurate with their economic costs, promote efficiency, both within the industry and in downstream markets. However, the Regulator is cognisant of a number of risks associated with setting maximum prices:

- the imposition of regulated price caps preventing competitive outcomes eg by setting maximum prices below sustainable levels, such that competition would not emerge;
- the imposition of regulated prices leading to a misallocation of resources eg through regulatory risk impacting on investment decisions;
- distortion or misallocation of resources ie allocative efficiency may not be maximised, both within the entity (eg distortion of investment decisions), in downstream markets and across the economy. This could arise if maximum prices are set either too low or too high, or if the regulatory framework itself is flawed and creates incentives that may bias business decisions;
- stifling of innovation in the industry, thus dynamic efficiency may not be maximised; and

- distortions in the allocation of costs/prices between regulated and unregulated services and between user groups.

In Hydro Tasmania's preliminary submission, it contended that the lack of purchases of FCAS hedges is evidence of the inefficiency caused by the current regulation of raise FCAS. Hydro Tasmania also argued that it would be expensive to review the methodology of the FCAS pricing mechanism, if the need ever arose. Hydro Tasmania stated that the threat of declaration alone would be an effective deterrent to excessive future prices. Finally, Hydro Tasmania also stated that because average FCAS spot prices over the regulated period have been lower than the regulated price is evidence that an efficient market outcome can be achieved without regulation.

The Regulator notes that there are costs associated with any form of active regulation and accepts that the threat of declaration may be an effective deterrent to any excessive prices in the future ie if the Regulator decides not to retain the declaration, it could continue to monitor the FCAS market and could re-instate the same regulatory arrangements if it saw inappropriate pricing behaviour by Hydro Tasmania in the future. This type of passive regulation, if effective, would be a more efficient form of regulation than active regulation.

The Regulator considers that the retention of the existing declaration would not improve the efficiency of the Tasmanian electricity supply industry.

3.4 Promotion of the public interest

The public interest in this matter includes both promoting competition in the electricity supply industry and also efficiency through appropriate regulation of price and the redressing of the inequality of bargaining power arising when some classes of customers face a monopoly supplier.

As discussed above, the declaration of FCAS as a declared service does not appear to have significantly promoted competition or efficiency in the electricity supply industry.

In its preliminary submission, Hydro Tasmania contended that the development of competition and lack of efficiency gains in FCAS regulation is evidence that retaining the declaration is not in the public interest.

The Regulator has also considered FCAS prices since the declaration was made and notes that prices have remained low. Whilst the Regulator acknowledges that a return to the FCAS pricing behaviours which Hydro Tasmania displayed in 2009 would not be in the public interest, the Regulator considers it unlikely that this type of pricing would return, especially considering if it did occur the Regulator could make a new declaration at any time and recommence the regulation of FCAS pricing.

The Regulator considers that the retention of the existing declaration is not in the public interest.

4 REGULATOR'S CONCLUSIONS AND PROPOSAL

The Regulator is of the opinion that whilst Hydro Tasmania has substantial market power in providing raise contingency FCAS there is insufficient evidence to support the continued regulation of these services to promote competition, efficiency or public interest.

The Regulator also notes:

- the lack of interest from market participants in purchasing the regulated FCAS products;
- the recent history of raise FCAS pricing; and
- the Regulator's ability to declare FCAS as a declared electrical service should its ongoing monitoring activities identify FCAS pricing anomalies in the future.

For these reasons, the Regulator proposes revoking the existing FCAS declaration.

5 NEXT STEPS

Following consideration of submissions made in response to this Consultation Paper, the Regulator will make a decision as to whether to retain or revoke the existing declaration of raise contingency FCAS as a declared electrical service. The Regulator intends to make a decision on the retention or revocation of the existing declaration by no later than 5 June 2015 and will publish the reasons for its decision shortly thereafter.

If the Regulator decides to retain the declaration, the Regulator is required to conduct an investigation into FCAS pricing and, as a result of that investigation, make a new FCAS price determination.