17 October 2013

Mr Warwick Anderson
General Manager – Network Regulation Branch
Australian Energy Regulator
GPO Box 3131
Canberra ACT 2601

via email: rateofreturn@aer.gov.au

Dear Mr Anderson

AER Rate of Return Guideline – 2013 Nobel Prize in Economic Sciences

The Energy Networks Association (ENA) recently lodged with the Australian Energy Regulator its response to the AER's draft *Rate of Return Guideline* and the associated *Explanatory Statement*.

As you know, the ENA has consistently advocated an approach of giving genuine consideration and weight to estimates from a range of asset pricing models in estimating a required return on equity for a benchmark efficient entity. These models include the Sharpe-Lintner CAPM, the Black CAPM, the Wright approach and the Fama-French Model.

ENA members would like to draw your attention to the awarding on 14 October 2013 of the Sveriges Riksbank Prize in Economic Sciences in Memory of Alfred Nobel (commonly referred to as the Nobel Prize in Economic Sciences) jointly to Eugene F. Fama, Lars Peter Hansen, and Robert J. Shiller for their empirical analysis of asset prices.

The ENA considers this awarding is a material development relevant for the AER's consideration of the role assigned to the Fama-French Model in its finalised guideline, and its application of Clause 6.5.2 (e) of the *National Electricity Rules* and the equivalent gas provisions.

In conjunction with this announcement, the Economic Sciences Prize Committee (the Committee) released a short scientific background paper *Understanding asset prices* (background paper) which provides context to the contribution of Eugene Fama's asset pricing work to empirical research and market practice since the development of the Sharpe-Lintner CAPM. The Committee cites the Fama-French Model in its background paper explaining the basis for the award. Please find attached a copy of this background paper (Attachment A).

The Committee's background paper notes that:

> *…the classical Capital Asset Pricing Model (CAPM) – for which the 1990 prize was given to William Sharpe – for a long time provided a basic framework. It asserts that assets that correlate more strongly with the market as a whole carry more risk and thus require a higher return in compensation. In a large number of studies, researchers have attempted to test this proposition. Here, Fama provided seminal methodological insights and carried out a number of tests. It has been found that an extended model with three factors – adding a stock's market value and its ratio of book value to market value – greatly improves the explanatory power relative to the single-factor CAPM model.* (p.3)

In respect of the contribution of the Fama-French Model to market practice and investment analysis the Committee note:

> *…following the work of Fama and French, it has become standard to evaluate performance relative to "size" and "value" benchmarks, rather than simply controlling for overall market returns.* (p.44)

The Committee further notes that the Fama-French Model is used commonly by professional investors in guiding portfolio decisions and evaluating investment performance, as well as by academics.

The background paper also discusses the fact that a key motivating reason for the development of the Fama-French Model was the observed shortcomings and poor predictive performance of the Sharpe-Lintner CAPM which is currently proposed by the AER as its foundation model. For example, in tracing this empirical literature the background paper states:

> *Most of these results were integrated in the widely cited paper by Fama and French (1992), which convincingly established that the CAPM beta has practically no additional explanatory power once book-to-market and size have been accounted for.* (p.39)

The background paper notes that one weakness of the Fama French Model is that it is silent on the underlying reasons for why its additional risk factors are priced by investors. However, the Committee then goes on to survey the large body of theory and research since undertaken to explain the rationale for a range of potential risk factors and the Fama-French Model's very strong empirical performance.

Further continuing theoretical and empirical work is highlighted in the background paper that seeks to explain why the observations of the Fama-French Model are so strong, relative to the CAPM. This continuing work is not a reason to postpone giving some weight to the estimates of the model now. Indeed, the following of empirical findings with development of supporting theories is a process referenced throughout by the Committee in relation to, for example, the area of behavioural finance. To apply an analogy, compasses were used for centuries as navigational guides before science settled on the theory of magnetism as the most likely explanation as to why a needle reliably points to magnetic North.

In their overall conclusion on the contribution of Fama's work to the area of asset pricing the Committee note:

> *New factors – in particular the book-to-market value and the price-earnings ratio – have been demonstrated to add significantly to the prior understanding of returns based on the standard CAPM.* (p.45)

The ENA considers these conclusions and the comments above highlight the unsustainability of the proposed approach in the current draft guideline to have <u>no</u> regard to return on equity estimates arising from the Fama-French Model in rate of return decision-making. They also reinforce the significant potential for inconsistency between the foundation model currently in the AER's draft guideline and the requirements of relevant Rules provisions.

Key reasons provided by the AER for having no regard to the Fama-French Model in its rate of return considerations is that the model "is not based in well accepted theory", is not "fit for purpose of forecasting equity returns for service providers in Australia" and that it is "limited in its usefulness in estimating returns on equity". The ENA and its members and advisors are unable to reconcile any of these draft AER conclusions with their own experience, the relevant economic literature, or the above extracts from the Nobel Committee's background paper and the awarding of the Nobel Prize itself to Eugene Fama for his asset pricing work.

The ENA provides this further submission given our mutual interest in achieving a final rate of return guideline which is based on a sound application of the relevant Rules provisions.

We would be pleased to discuss our perspectives on this development further. If you have any questions, or ENA can be of further assistance in developing these proposal, please contact Garth Crawford, Principal Advisor, Economic Regulation on 02 6272 1555.

Yours sincerely

John Bradley
Chief Executive Officer

cc: Ms Cristina Cifuentes, Commissioner