# SUBMISSION TO THE ENERGY SECURITY BOARD NATIONAL ENERGY GUARANTEE DRAFT DESIGN CONSULTATION PAPER

MARCH 2018

The CEFC welcomes the opportunity to make a submission on the Energy Security Board's National Energy Guarantee draft design consultation paper.

## INTEGRATING HIGH LEVELS OF RENEWABLES INTO THE NATIONAL ELECTRICITY MARKET IS ACHIEVABLE WITH THE RIGHT MARKET DESIGN

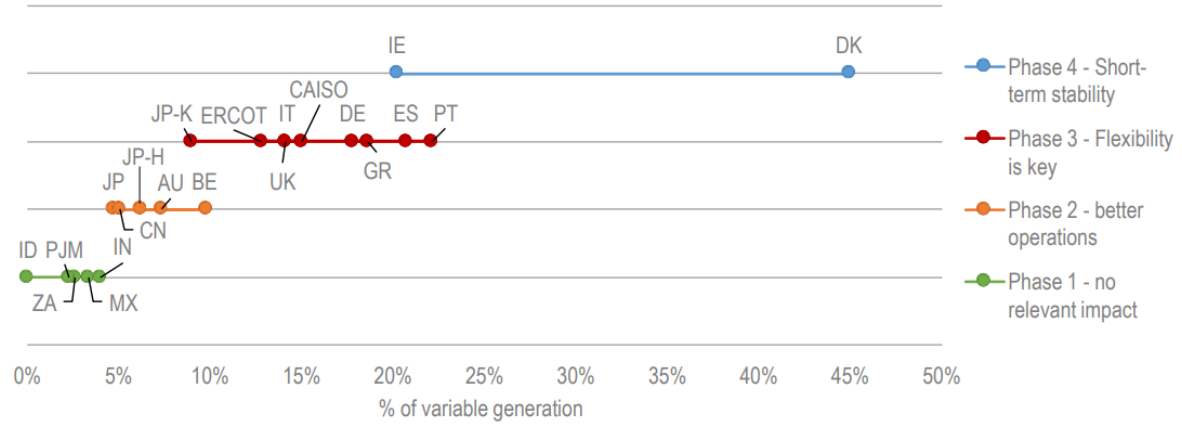
The National Energy Guarantee is designed to promote investment in the National Electricity Market to ensure that reliability and emissions reduction objectives are met. The Energy Guarantee introduces two new obligations on retailers: an emissions intensity requirement applying across all NEM regions, and a region-specific reliability obligation that would be triggered when a reliability gap has been forecast.

The National Electricity Market is capable of integrating very high levels of renewables while maintaining reliability and affordability. The next generation of Australia's national electricity policy should put in place market frameworks that will allow Australia to meet increasingly ambitious emissions reduction targets consistent with the Paris Agreement while delivering reliable and affordable electricity.

## AUSTRALIA IS AT AN EARLY STAGE IN RENEWABLES DEPLOYMENT BUT SHOULD PLAN FOR HIGHER INTEGRATION OVER TIME

The International Energy Agency categorises countries' electricity systems into four phases of renewables integration, as explained below, depending on their annual generation shares from variable renewable energy resources (IEA 2018a).

**Figure 1: Variable renewable energy shares by country, 2016**




*Source: International Energy Agency*
*Note: AU = Australia*

Each phase of renewables integration requires a different set of measures. With less than 10 per cent of generation from variable renewable energy (VRE), Australia's electricity system is in **Phase 2**, which is characterised by VRE becoming 'noticeable' in system operation. New investment in transmission may be required in Phase 2, and consideration should be given to deploying complementary technologies and promoting geographically diverse VRE development to achieve reliability.

As deployment extends into **Phase 3**, flexibility becomes a priority. At that stage, policy, regulatory and market frameworks play an important role in guiding investment decisions to promote system-friendly VRE deployment.

System value takes into account whether the location and time-of-day generation profile of new capacity adds to or subtracts from the value of the energy delivered by the project investment. Market design that aligns investment signals with system value will allow high levels of renewable energy integration while maintaining reliability.

Evidence that market design is promoting system value would include: geographically balanced new variable renewable energy capacity, investment in short and long-term energy storage, network augmentation, and high levels of demand-side response.

## MINIMISING THE COSTS OF THE TRANSITION REQUIRES A CLEAR LONG-TERM GOAL AND A DURABLE POLICY FRAMEWORK

Minimising the costs of Australia's energy transition will require a clearly stated long-term objective and a durable long-term policy framework to achieve it. In its 2018 in-depth country review of Australia (IEA 2018b), the IEA said:

> *a government-led mid-century low-emission strategy is required to set an emissions reduction goal for the power sector, identify the potential contribution from renewable energy and energy efficiency, and ensure that the retirement of old power plants can be done in a way to ensure competitiveness, security and reliability of supply at minimal cost.*

A long-term emissions reduction and policy framework would allow the integrated coordination and planning necessary to achieving a smooth transition of Australia's electricity system to a low-carbon system. A clear and consistent vision would promote an appropriate mix of investment in generation capacity, demand response, network and storage assets.

## DESIGN FEATURES OF THE NATIONAL ENERGY GUARANTEE

The CEFC offers several observations in response to questions raised in the draft design consultation paper.

**Eligibility requirements for reliability contracts should be flexible to allow new contract types to emerge.** The reliability requirement would require each retailer to show evidence that its share of the peak demand requirement is covered by eligible contracts. Variable and dispatchable renewable energy resources will contribute to system reliability, and as those technologies mature, new contracts could to be offered in the market. For example, hybrid generators with energy storage may choose to offer 'partial' firm contracts that cover certain hours of the day. It is important that any eligibility requirements be flexible enough to allow for contract types to change over time.

**Solar and demand response are quick to deploy, so the trigger period for the reliability requirement could be short**. Recent market experience shows that solar PV, battery storage and demand response capability can be deployed quickly. Given the challenges in accurately forecasting reliability gaps and the fact that investment can respond rapidly to market opportunities, the trigger period for the reliability requirement could be short.

**Arrangements for LRET projects will need to be clarified.** Given that the emissions requirement will overlap with the Large-scale Renewable Energy Target until 2030, it would be desirable to clarify how the two policies will operate side-by-side.

**Meeting Australia's long-term emissions reduction goals will require all of Australia's electricity emissions to decline**. It would be desirable to clarify what arrangements will apply to the electricity systems in Western Australia and the Northern Territory, noting that if policies are not in place to reduce electricity emissions in those regions, they may lose investment opportunities and National Electricity Market regions may be required to reduce emissions faster, resulting in a suboptimal allocation of emissions reduction costs across the sector.

## ABOUT THE CEFC

The Clean Energy Finance Corporation invests, applying commercial rigour, to increase the flow of finance into the clean energy sector.

Our mission is to accelerate Australia's transformation towards a more competitive economy in a carbon constrained world, by acting as a catalyst to increase investment in emissions reduction.

We do this through an investment strategy focused on cleaner power solutions, including large and small-scale solar, wind and bioenergy; and a better built environment, with investments to drive more energy efficient property, vehicles, infrastructure and industry.

The CEFC also invests with co-financiers to develop new sources of capital for the clean energy sector, including climate bonds, equity funds, aggregation facilities and other financial solutions.

The CEFC operates under the *Clean Energy Finance Corporation Act 2012*.

The CEFC's strategic framework supports sectors in the Australian economy that are the largest sources of carbon emissions to reduce their emissions and ultimately to help to transform the economy to achieve net zero emissions in the second half of the century.