



**Australian Government**

**Department of the Environment and Energy**

# Clean Energy Finance Corporation Amendment (Carbon Capture and Storage) Bill 2017

## Submission to the Environment and Communications Legislation Committee

9 March 2018

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## INTRODUCTION

This submission provides information to the Environment and Communications Legislation Committee in relation to the inquiry it is conducting on the *Clean Energy Finance Corporation Amendment (Carbon Capture and Storage) Bill 2017* (the Bill).

Carbon capture and storage (CCS) technology has the potential to form an important component of global and domestic efforts to combat climate change. Should the Bill be enacted as drafted, the Clean Energy Finance Corporation (the CEFC) would have the ability to invest in CCS should any projects of sufficient commercial merit come forward following the change.

## Carbon Capture and Storage

Carbon capture and storage is a technological process in which carbon dioxide (CO<sub>2</sub>) is captured at the point of emission and transported and stored to avoid its release into the atmosphere. Captured CO<sub>2</sub> can be stored in deep geological formations (like oil and gas fields) or in products such as stable carbonates used as building material. The capture process can remove 70-90 per cent of the CO<sub>2</sub> generated from fossil fuel (coal, oil and gas) electricity generation and industrial processes (such as steel and cement manufacture).<sup>1</sup>

There are currently 19 large-scale CCS projects either in operation or very close to operation around the world.<sup>2</sup> Most of these involve using the captured CO<sub>2</sub> for enhanced oil recovery, although there are two projects involving coal-fired power plants that are currently operational. Other projects involve industrial processes such as natural gas processing and fertiliser production, where CO<sub>2</sub> separation is an integral part of an existing process. The oldest of these, the Sleipner oil and gas project in Norway, has been capturing and storing CO<sub>2</sub> for over 20 years and has abated over 17 million tonnes of CO<sub>2</sub> to date.

In Australia, the Chevron Gorgon LNG project is expected to commence capturing CO<sub>2</sub> from its gas field sometime this year. In this case CCS has been mandated by the Western Australian government as part of the project's development approval. At full production, each year around 4 million tonnes of CO<sub>2</sub> would be injected into undersea storage, reducing emissions from the facility by around 40 per cent. This project is Australia's first commercial-scale CO<sub>2</sub> injection project, and one of the largest of its kind in the world. Other CCS projects in Australia are still at the demonstration or feasibility stage; some of these (such as the CarbonNet and Surat Basin projects) involve coal power plants, while others (such as the CO2CRC Otway project) involve gas processing.

Carbon capture and storage has been considered to be an essential technology in the global decarbonisation process. International Energy Agency modelling, for example, has found that CCS could deliver 13 per cent of the cumulative emissions reductions needed by 2050 to limit the global increase in temperature to 2°C.<sup>3</sup> Likewise, the Intergovernmental Panel on Climate Change has found that many climate change models predict it will not be possible to reach the

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<sup>1</sup> See, eg. Alan Finkel, [Independent Review into the Future Security of the National Electricity Market](#) (2017), p.187; CSIRO, [Low Emissions Technology Roadmap](#) (2017), p.49.

<sup>2</sup> International Energy Agency, [Tracking Clean Energy Progress 2017](#), p.34.

<sup>3</sup> International Energy Agency, [Carbon Capture and Storage: The Solution for Deep Emissions Reductions](#) (2015), p.3.

2°C emissions target in the absence of CCS.<sup>4</sup> Consequently, Dr Fatih Birol, Executive Director of the International Energy Agency, has asserted that “deployment of CCS will not be optional in implementing the Paris Agreement”.<sup>5</sup>

Since 2003, the Government has committed more than \$3.5 billion and has distributed more than \$1.3 billion to CCS-related projects.<sup>6</sup> In its 2018 review of Australia’s energy policies, the International Energy Agency recommended that the Government should accelerate efforts to develop and deploy CCS in Australia and that it should continue maintaining a position of international leadership in this area.<sup>7</sup>

## **The Bill**

The Bill removes the prohibition on the CEFC investing in carbon capture and storage technologies. It should be noted that this change will not require the CEFC to invest in such projects; it merely gives the CEFC the option of doing so, should any projects of sufficient commercial merit come forwards following the change.<sup>8</sup>

## **RECOMMENDATION**

The Department of the Environment and Energy recommends that the Bill be enacted as drafted.

## **BACKGROUND**

### **The Clean Energy Finance Corporation**

The CEFC was established on 3 August 2012 as an independent statutory authority through the *Clean Energy Finance Corporation Act 2012* (the Act). It formally commenced operations in April 2013. It is a corporate Commonwealth entity under the *Public Governance, Performance and Accountability Act 2013*.

The object of the CEFC is to increase the flow of finance into the clean energy sector by making commercial investments in clean energy technologies and projects. It has an appropriation of \$10 billion with which to do so.<sup>9</sup> It also partners with the finance industry to develop new sources of capital for the clean energy sector, including climate bonds, equity funds and other financial solutions. To 31 December 2017, it has invested almost \$5.8 billion in a diverse range of projects with a total value of \$16 billion.

The CEFC’s investment function is set out in Part 6 of the Act. Under Part 6, the CEFC must invest in “clean energy technologies” (i.e. energy efficiency, low-emission or renewable energy

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<sup>4</sup> Intergovernmental Panel on Climate Change, [Climate Change 2014: Synthesis Report – Summary for Policymakers](#), p.24.

<sup>5</sup> International Energy Agency, [20 Years of Carbon Capture and Storage: Accelerating Future Development](#) (2016), p.7.

<sup>6</sup> The Australia Institute, [Money for Nothing](#) (2017), p.1.

<sup>7</sup> International Energy Agency, [Australia: 2018 Review](#), p.195.

<sup>8</sup> It may well be the case that no CCS projects are currently capable of meeting the benchmark rate of return specified in the CEFC’s current Investment Mandate.

<sup>9</sup> Section 46, CEFC Act.

technologies)<sup>10</sup> and its investments must be solely or mainly Australian-based.<sup>11</sup> Relevantly, the CEFC must also ensure it does not invest in a “prohibited technology” (i.e. technology for carbon capture and storage, nuclear technology or nuclear power).<sup>12</sup>

The CEFC is governed by a Board consisting of a Chair and between four and six other members.<sup>13</sup> Board members are jointly appointed on a part-time basis by the Minister for the Environment and Energy and the Minister for Finance.<sup>14</sup> The Board’s main responsibility is to make investment decisions on proposals placed before it by the CEFC executive team. The Board is guided in its decision-making by an Investment Mandate issued by the Government.<sup>15</sup> Investment mandates cover matters such as risk and return, eligible technologies and the allocation of investments between them, and allowed types of financial instruments. Nonetheless, final responsibility for investment decision-making ultimately rests with the Board, and the Government may not direct the CEFC to make any particular investments.

## CONTACT DETAILS

For further information, please contact the Clean Energy Technology Finance team in the Department of the Environment and Energy:

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<sup>10</sup> Ibid section 60.

<sup>11</sup> Ibid section 61.

<sup>12</sup> Ibid section 62.

<sup>13</sup> Ibid section 15.

<sup>14</sup> Ibid section 16.

<sup>15</sup> See generally ibid sections 64-67. The CEFC’s current Investment Mandate is the [Clean Energy Finance Corporation Investment Mandate Direction 2016 \(No.2\)](#).