

Chapter 3

The bill

Introduction

3.1 The *Safe Climate (Energy Efficient Non-Residential Buildings Scheme) Bill 2009* has been introduced to improve the energy efficiency of commercial buildings. The bill introduces a building energy efficiency trading scheme. The scheme will set an emissions intensity baseline, which will decline over time, for each type of commercial building.

3.2 As chapter 1 noted, the bill establishes a Building Energy Certificate Scheme which will allocate tradeable certificates—each worth one tonne of greenhouse gas—to each participating building owner. These certificates will be allocated to building owners based on the intensity baseline for their building type and the size of their building. Participating building owners will then buy, sell or stockpile the tradeable certificates. They must report their building's energy intensity and surrender certificates to the value of this intensity. Where they fail to surrender sufficient certificates, the bill has a provision for a penalty.¹

Provisions of the bill

3.3 The Explanatory Memorandum (EM) details the provisions of the bill.

- Part 2, section 9 of the bill states that, at the start of the scheme, the Minister must determine through regulations to which types (or sizes) of buildings the Act will apply. Additional building types can be added in later years. The Minister must also determine the method which building owners must use to measure the emission intensity of buildings (section 10). This method may be varied according to different circumstances, such as building type, lease arrangement etc. Emission intensity is measured in greenhouse gas emissions per square metre.
- Part 2, section 12 of the bill states that a two year transitional reporting period will start on the next 1 July after the commencement of the Act. In this period the owners of a non-residential building types participating in the scheme from the outset must report their buildings emission intensity annually to the Greenhouse and Energy Data Officer. Building types brought into the scheme at a later date will similarly have a two year transitional reporting period.
- Section 13 of the bill states that, based on emission intensity data collected during the transitional reporting period, the Minister would then set an intensity cap for the relevant building types each year for 10 years. The

1 *Explanatory Memorandum*

intensity cap would be guided by the average intensity for each city or region and would decline predictably over time. Cap 'gateways' setting an upper and lower bound into the future may be used to balance investor certainty with the need for regulatory flexibility.

- Part 4 of the Act establishes a Building Efficiency Certificate Scheme which will be administered by the Greenhouse and Energy Data Officer. The Administrator will allocate tradable certificates, each worth one tonne of greenhouse gas, to each participating building owner. The amount of certificates each building owner will receive will be determined by the emission intensity baseline for their building type, and the size of their building.
- Part 4, section 18 of the bill states that the Minister must establish, within 12 months of the start of the scheme, a trading mechanism to allow building owners to buy, sell or stockpile the tradable certificates. Section 19 provides that participating building owners must continue to report their building's energy intensity and surrender to the Greenhouse and Energy Data Officer certificates to the value of the emissions intensity of their building.
- If the owner of a non-residential building fails to surrender sufficient certificates, the owner has a building efficiency certificate shortfall and is liable to pay a building efficiency certificate shortfall penalty (section 20). The amount of the building efficiency certificate shortfall penalty is calculated by multiplying the amount of the building efficiency certificate shortfall by the scheme penalty rate for a year prescribed by the regulations.
- The Greenhouse and Energy Data Officer must keep a register to be known as the Register of the Emissions Intensity of Non-Residential Buildings. The register may be kept completely or partly in electronic form and freely available for public inspection.²

Financial incentives—tradability of certificates

3.4 The bill incorporates financial incentives for building owners to improve the energy efficiency of their buildings. As noted earlier, all building owners will be given certificates equal to the value of the baseline for their class of building and will need to surrender certificates to the value of the emissions intensity of the building. To the extent that buildings in a given class emit below or above the baseline, there is opportunity for trading.

3.5 For example, owners of a particular class of office building will receive a certain number of certificates, equal to the emissions baseline, and reflecting the average emissions intensity of the building type. An owner whose building(s) emits below the baseline will be able to sell their excess certificates to an owner whose building(s) emits above the baseline. The more excess certificates—the lower the

building's emissions intensity relative to the baseline—the greater the potential to profit.

Penalties—reporting and certificate shortfall

3.6 The bill incorporates pecuniary penalties for failing to comply with the transitional and annual reporting requirements. Section 28 states that for each day that a person fails to comply with the reporting requirements in sections 12, 15 and 59, s/he is liable for a civil penalty of 100 penalty units. This equates to \$11 000 a day.³ The flat 100 penalty unit does seem a significant penalty to impose on small businesses. As Mr Peter Clinnick commented in his submission to the committee:

The Penalty Units applied in this and other sections might be insufficient in the case of very large companies and might be too much for small businesses. There needs to be a scaled approach to penalties, in line with the dimensions of the building, or better still the amount of energy consumed or emissions intensity.⁴

3.7 Section 20 of the bill also provides for a pecuniary penalty where the owner of a building that emits in excess of the baseline does not surrender permits to the value of the baseline. Subsection 20(4) states that the amount of the building efficiency certificate shortfall penalty is the amount (in dollars) calculated by multiplying the amount of the building energy certificate shortfall by the scheme penalty rate for a year prescribed by the regulations.

3.8 Unlike the failure to meet reporting requirements, the bill does not establish a penalty rate for failure to surrender adequate permits. This will be determined by regulations. In this case, the penalty will be proportionate to the quantity of excess emissions (the energy certificate shortfall).

Classes of non-residential buildings

3.9 Part 2, section 9 of the bill refers to 'classes of non-residential buildings'. It states that the Minister must determine by legislative instrument the different classes of non-residential buildings to which the Act applies (section 9(1)).

3.10 It is unclear from the bill how—or how many—of these classes of building might be devised. One option might be derived from volume 1, part A3 of the Building Code of Australia, which classifies various types of buildings (see Appendix 3).

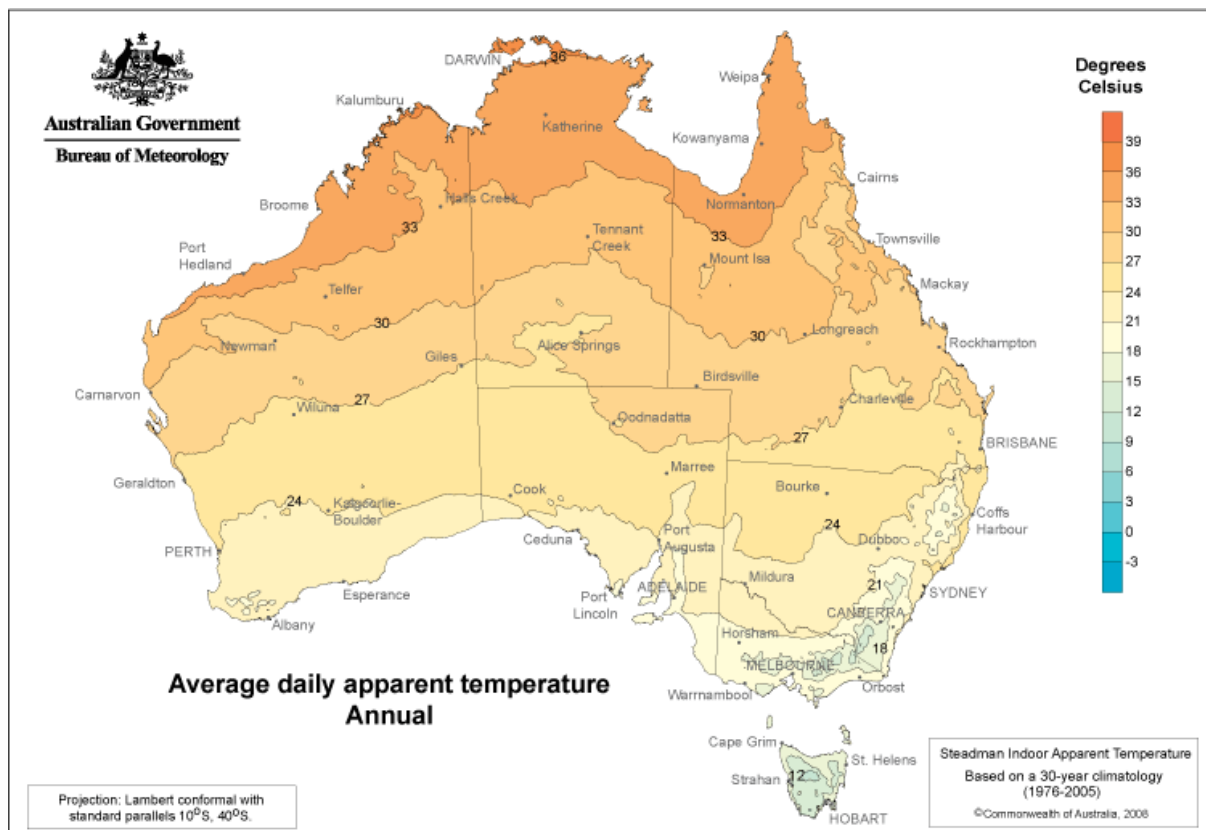
3 Penalty Unit Conversion Table,
[http://www.ag.gov.au/www/agdlrwpattach.nsfNAP!ICFD7369FCAE9B8F32F34IDBE09780IF\)-3TABLE+OF+DATA.htm!\\$file!3TABLE+OF+DATA.htm](http://www.ag.gov.au/www/agdlrwpattach.nsfNAP!ICFD7369FCAE9B8F32F34IDBE09780IF)-3TABLE+OF+DATA.htm!$file!3TABLE+OF+DATA.htm)

4 Peter Clinnick, *Submission 6*, p.3.

Emissions intensity for each city or region

3.11 The EM refers to the intensity cap being guided by the average intensity 'for each city or region'. Lend Lease's submission noted that the bill will set a benchmark for each building type 'in each climatic region'.⁵ However, the bill makes no reference to any region-based measures. This will presumably be covered in the regulations.

3.12 The map below is produced by the Australian Bureau of Meteorology (BoM). It shows the average annual and average monthly indoor apparent temperature across Australia over the period 1976 to 2005. Indoor apparent temperature describes the combined effect of temperature and humidity on the typical human. Apparent temperature is an estimation of what the temperature "feels like" to an appropriately dressed adult. The temperatures reflected in the map are the Steadman Indoor Apparent Temperatures and do not take into account the effect of sun or wind.⁶



Source: Bureau of Meteorology

3.13 The map shows that indoor apparent temperature increases towards the north of the continent, following the pattern of increasing air temperature towards the equator. The BoM notes that elevation also influences indoor apparent temperature,

5 Lend Lease, WSP Lincolne Scott, Advanced Environmental, *Submission 8*, p. 22.

6 Bureau of Meteorology, 'Average daily apparent temperature', http://www.bom.gov.au/jsp/ncc/climate_averages/app-temperature/index.jsp (accessed 2 March 2010).

with cooler mountain areas such as the Flinders Ranges and the Great Dividing Range experiencing lower apparent temperatures.⁷

3.14 The table below shows that electrical energy consumption in the base building varies quite significantly between some of the major Australian cities. The data applies to a 'B-form' building: three levels with a total floor area of 2000m² and a length to width ratio of 2: 1. Energy consumption (kWh/rnz per annum) from cooling commercial buildings in Darwin and Cairns is more than four times higher than the energy from cooling commercial buildings in Melbourne.⁸

Table 3.1

Energy using services	Climate Zone				
	Darwin/ Cairns	Brisbane/ Mackay	Adelaide/ Sydney/ Perth	Canberra/ Hobart	Melbourne/ Albany
Tenant					
Lighting	33	33	33	33	33
Plug-in equipment	40	40	40	40	40
Sub-total	73	73	73	73	73
Base building					
Cooling	107	80	57	30	25
Pumps, other ancillaries*	9	10	9	8	7
Fans	35	37	39	34	31
Domestic hot water	6	6	6	6	6
Sub-total	157	133	111	80	71
Total	230	206	184	153	144

Source: ABCB Office: 'Monitoring of Electrical Circuits', June 2006, p. 2.

3.15 Table 3.1 shows that while electrical energy consumption in the base building varies quite significantly from city to city, the tenant's consumption is the same between the cities. What is not clear from the table is the extent to which tenants' use of the building contributes to varying consumption in the base building.

7 Bureau of Meteorology, 'Average daily apparent temperature', http://www.bom.gov.au/jsp/ncc/climate_averages/app-temperature/index.jsp (accessed 2 March 2010).

8 ABCB Office, 'Monitoring of Electrical Circuits', June 2006, p.2.

'Cap and trade' or 'baseline and credit'?

3.16 The committee received conflicting evidence as to whether the scheme proposed in the bill should be termed a 'cap and trade' scheme or a 'baseline and credit' (or emissions intensity) scheme. In its first submission to this inquiry, Lend Lease and WSP Lincolne Scott described their scheme as follows:

The scheme will set an emissions intensity baseline, which will decline over time, for each type of commercial building. Property owners that emit above the baseline will be required to buy emissions intensity certificates from those that emit below the baseline.⁹

3.17 However, in a supplementary submission, Lend Lease and WSP Lincolne Scott stated that the scheme in the bill:

...is NOT a baseline-and-credit scheme. This Scheme allocates permits to the cap, which is based on a decreasing trajectory. There is a mandatory obligation to acquit permits by trading with better performing buildings, where a building exceeds the cap.¹⁰

3.18 In the committee's view, the bill's scheme is more a variant of a baseline and credit (or an emissions intensity) scheme than a cap and trade scheme. Unlike a textbook cap and trade scheme:

- there is not an absolute cap on emissions—participants *can* emit more than the baseline if they fail to surrender adequate certificates;
- the scheme covers a single sector comprehensively rather than the major emitters within an economy; and
- the 'cap' in this scheme is based on average emissions intensity rather than the concentration of CO₂.

3.19 However, to the extent that the deterrence of a financial penalty ensures the integrity of the emissions 'cap', the scheme does have similarities with a cap and trade scheme. Above all, it will establish a market signal through a carbon price.

Educating stakeholders

3.20 A final aspect of the bill that has not received attention during this inquiry is the need to educate stakeholders about their responsibilities under the legislation, and to train and re-train these stakeholders in energy efficiency and green building technologies. The success of the scheme, and the capacity for the baseline(s) to be progressively reduced over time will depend crucially on informing building owners

9 Lend Lease, WSP Lincolne Scott and Advanced Environmental, *Submission 8*, p. 6.

10 Lend Lease, WSP Lincolne Scott and Advanced Environmental, *Supplementary submission*, p. 6. Emphasis in original.

of their legislative responsibilities and the opportunities they have to reduce their reliance on certificates.

3.21 In this context, it is of concern that a 2008 survey of 300 Australian business Chief Executive Officers found that 67 per cent of businesses are concerned or unsure about compliance obligations, and only a handful of businesses (three per cent) have implemented a strategic response to climate change.¹¹

Summary

3.22 The bill establishes a market for the trade of greenhouse gas certificates among non-residential building owners in Australia. Through the trade of certificates, a carbon price will be set. The bill establishes incentives for building owners to improve their energy efficiency—through selling and stockpiling certificates—and penalties for those who lag behind.

3.23 However, there is a lot of detail fundamental to the operation of the scheme that has been left to the regulations. This includes:

- the types and classes of buildings;
- the climatic regions where different baselines (or 'caps') will be set;
- the number of baselines that will be set for each type or class of building;
- the scheme penalty rate for failing to surrender adequate permits; and
- the downward trajectory of the baseline over time.

11 Cheryl Desha and Charlie Hargroves, 'Re-engineering higher education for energy efficient solutions', *ECOS Magazine* vol. 17, October-November 2009, p. 151.

