

Chapter 11

Sustainability

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Sustainability

Introduction

The most recent [ACT State of the Environment Report](#) (2011) found that in the ACT, 'Our city, our economy and our society rely on the environment. However, the amount of resources we use is unsustainable and damaging our environment at both local and global levels'

The report identifies key environmental challenges including the impact of an increasing, ageing and affluent population, the impact of climate change on natural resources, and high consumption and levels of car use as increasing our ecological footprint and greenhouse gas emissions. The report concludes that 'as a largely urban population who import most of our consumer goods and services, we are increasing the impact on our local and global natural environment'.

The issue of sustainability cuts across most of the environmental issues and environmental legislation in the ACT. As a result, the law relating to questions of urban sustainability, energy and water use is spread across a number of enactments. In some fields, it draws upon New South Wales law, for example, water efficiency and an early version of carbon trading. In relation to the national electricity law, it draws upon national legislation enacted through mechanisms of cooperative federalism. Integration of the law and associated regulatory schemes within an over-arching Sustainability Act would provide the opportunity for an improvement to our climate laws by delivering a more cohesive and efficient system. Alternatively a common set of definitions of the ecologically sustainable development (ESD) principles, could be modelled on NSW law (i.e. *Protection of the Environment Administration Act 1991*, s 6(2)).

In 2011, the ACT Department of the Environment, Climate Change, Energy and Water (DECCEW) and the ACT Planning Land Authority (ACTPLA) were merged to create the Environment and Planning Directorate (EPD). The Directorate also incorporates the former ACT Heritage and Government Architect, Transport Planning, Nature Conservation Policy and the Conservator of Flora and Fauna. In 2014 the Environmental Protection Authority was moved from the EPD to 'Access Canberra' which provides a combined 'shopfront' of the ACT government's regulatory services (see Contacts list at the back of this book).

This chapter describes the ACT laws that compel action to improve environmental sustainability. It examines provisions to reduce carbon emissions and energy use, improve energy, transport and water efficiency, and requirements to consider the environment in decision-making.

Sustainability and the law

Sustainability is most often understood in relation to the principles of ecologically sustainable development (ESD), which can be broadly defined as the ‘using, conserving and enhancing of the community’s resources so that ecological processes, on which life depends, are maintained, and the total quality of life, now and in the future, can be increased’.

Internationally accepted principles of sustainable development include intergenerational equity, the polluter pays principle, the precautionary approach, biodiversity conservation and ecological integrity, as well as improved valuation and pricing of environmental resources. For more information concerning the principles of sustainable development, the Brundtland Report ‘Our Common Future,’ published in 1987 by the UN World Commission on Environment and Development, sets out the principles in greater detail. In brief, the precautionary principle requires that where there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation. The inter-generational equity principle means the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced, for the benefit of future generations.

The principles of ESD are included in the objects clauses of a number of key ACT environmental laws, but are absent from others. For example, the *Utilities Act 2000* has amongst its objects ‘to promote ecologically sustainable development in the provision of utility services’ (s 3(e)), and the long title of the *Water Resources Act 2007* is ‘an Act to provide for sustainable management of the water resources of the Territory, and for other purposes’. The *Nature Conservation Act 2014* also includes ‘promoting the principles of ecologically sustainable development’ (s 6(h)). However, this same object has recently been removed from the *Environment Protection Act 1997*, which now simply lists the ‘effective integration of environmental, economic and social considerations in decision-making processes’ as an objective (s 3C(1)(d)).

The *Planning Act* takes a slightly different tack; it has an objective of a planning and land system that contributes to the orderly and sustainable development of the ACT. The term ESD is not applied; rather the Act speaks of sustainable development as the effective integration of social, economic and environmental considerations in decision-making processes (s 9). Generally, such objects are intended to direct and guide the administration of environmental laws. However, environmental sustainability is not a binding consideration in government decision-making and the extent to which consideration of ESD informs planning decisions is at the discretion of the decision-maker. They may choose to consider other factors, including economic considerations, which are also included in the definition of sustainable development. Given the discretionary nature of the requirement, only administrative acts seriously at variance with these principles would potentially be vulnerable to legal challenge.

Previously, all ACT departments and public authorities were required to include in their annual report a section on how their activities have accorded with sustainable development principles via the former section 158A of the *Environment Protection Act 1997*. This requirement was removed from that Act following amendments to the *Annual Reports (Government Agencies) Act 2004* (ACT), which were made in 2014. However, agencies are required to provide a detailed report on ecologically sustainable development as set out in the *Annual Reports (Government Agencies) Notice 2015* (Notifiable Instrument (2015-207)) under the *Annual Reports Act*. One problematic aspect of this change is that a future unsympathetic government could easily water down the reporting requirements by issuing a new notice, rather than seeking the agreement of the Legislative Assembly.

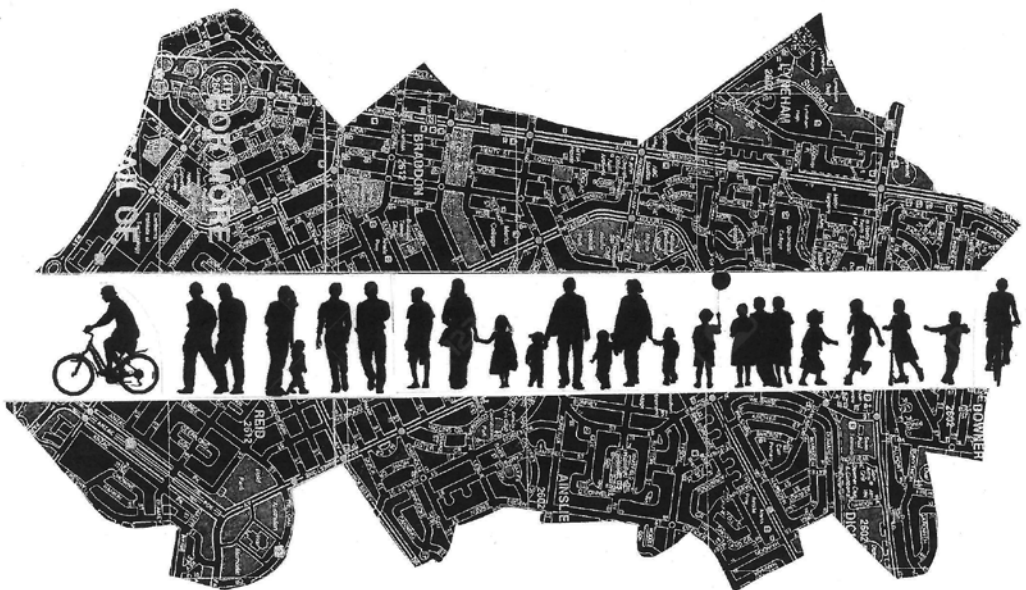
The *Commissioner for Sustainability and the Environment Act 1993* (ACT) created the office of the ACT Commissioner for the Environment, whose role is to operate as an ombudsman for environmental and sustainability matters, conducting investigations on complaints from the community regarding the management of the ACT's environment and also as directed by the Minister for the Environment. Among the objectives are to ensure regular reporting on progress towards ecologically sustainable development by the Territory and territory authorities; and to encourage decision-making that facilitates ecologically sustainable development (s 2B). An important requirement of the Commissioner's role is to produce annual *State of the Environment* reports for the ACT, which must include an assessment of the condition of the environment and an evaluation of the adequacy and effectiveness of environmental management (s 19 of that Act).

Part 4.5 of the *Nature Conservation Act* requires the Conservator of Flora and Fauna to prepare action plans for relevant species and ecological communities and for key threatening process (s 101). Action plans must set out proposals to ensure, as far as practicable, the identification, protection and survival of threatened species and ecological communities; and to minimise the effect of key threatening processes. In preparing a draft action plan, the conservator must consider the impact of climate change on the species or community; threats to the species or community; the connectivity requirements and critical habitat of the species or community (s 101) and consult with the Scientific Committee (s 102). Action plans are important strategic and reference documents for sustainable development and inform the development of management plans for public land and urban planning policy development and decision-making.

While principles of sustainable development are integrated into these ACT statutes through the objects of the legislation, the ACT has not enacted an over-arching statute specifically to promote sustainable development in government and private decision-making. The proposal for an overarching Sustainability Act was first raised in 2004, but has since disappeared from prominence. Such an Act could serve as a means to coordinate the ACT's environmental laws, increase the profile of sustainability in government decision-making, in the administration of legislation, the

allocation of resources and government procurement. A Sustainability Act would set out the government's responsibilities and ensure that sustainability concerns guided all decision-making. While sustainability considerations in decision-making processes do not necessarily lead to sustainable outcomes, this would be a positive development.

The legal framework for sustainability is only one aspect. Without adequate implementation and commitment at a policy level there is little chance that the goals embedded in legislation will be achieved. The ACT government has introduced many environmental strategies including a sustainability policy, People, Place, Prosperity: the ACT's Sustainability Policy, which was revised in 2009. Further, the ACT Government uses a Triple Bottom Line assessment framework to identify social, economic and environmental impacts (for example, as a mandatory part of the Cabinet submission process) and to an uncertain extent this has been integrated into policy development, as a matter of policy, rather than law. In addition, it has published specific policies or strategies that target key sectors such as the ACT Waste Management Strategy: Towards a sustainable Canberra (2011-2015); Transport for Canberra; the AP2: A new climate change strategy and action plan for the Australian Capital Territory; and the ACT Water Strategy 2014-44: Striking the Balance, all of which are available on the Environment and Planning Directorate website (see Contacts list at back of this book). Whether sustainability will be achieved depends upon the details of whether these policies, in combination with legislation, will be adequate to change individual, corporate and institutional behaviour and decision-making.



Sustainability in ACT planning law

Introduction

A key way in which sustainability issues intersect with the law concerns their treatment under planning and development law. This involves:

- requirements for sustainability considerations to be taken into account in planning of new suburbs and new construction and
- development and building approval exemptions for small scale renewable energy technologies such as photovoltaic (PV) and wind power.

Requirements to consider sustainability in the approval of new buildings and other developments are addressed in a number of ways including via the effect of Codes under the TP. The *Planning Act* states that the territory, the executive, a minister or a territory authority must not do any act, or approve the doing of an act, that is inconsistent with the TP (s 50). Additionally, ACT planning law is now informed by the policy documents described in the section above including the Action Plan 2 (AP2), which aims to implement a strategy to achieve the territory's legislated greenhouse gas reduction target of 40% by 2020 (see Chapter 2 in this Handbook for information on ACT planning; Chapter 3 for development approvals and Chapter 4 for environmental impact assessment).

Sustainable development in the Planning and Development Act (ACT)

The *Planning Act* includes amongst its objects to provide a planning and land system that contributes to the orderly and sustainable development of the ACT (s 6). The Act defines sustainable development (s 9) as the effective integration of social, economic and environmental considerations in decision-making processes achievable through the implementation of principles including the precautionary principle, the principle of intergenerational equity, the conservation of biodiversity and appropriate valuation and pricing of environmental resources.

The *Planning Act* does not directly require either the Planning Minister or the ACT Planning and Land Authority (ACTPLA) to make its decisions on a development application taking into account environmental sustainability (see ss 162 and 159 referring to the minister). However, this is indirectly achieved by ACTPLA via a requirement that it must exercise its functions in a way that, as far as practicable, gives effect to sustainable development (s 12(3)(a)).

The territory's Action Plan (AP2) has some direct effect on the planning scheme. AP2, for instance, states that the ACT Government will introduce legislation to restrict the replacement and installation of high-emission water heaters in houses and townhouses in gas-reticulated areas, with a view to introduce new standards for hot water heaters of all new residential buildings in the 2015 revisions of the ACT building code.

Sustainability in the ACT Planning Strategy

The *Planning Act* requires the ACT executive to make a planning strategy that sets out long term planning policy and goals to promote the orderly and sustainable development of the ACT. This is the ACT Planning Strategy. The strategy is required to be consistent with the social, environmental and economic aspirations of the people of the ACT. The primary object of the strategy is to promote the development of the ACT as described and in accordance with sound financial principles (ss 105, 107). The Act requires that the strategy must be considered when proposed variations to the TP are drafted and when the statement of strategic directions in the TP is amended. However, the Act also specifically states that the planning strategy is not a relevant consideration in decision-making about development approvals, EIS and inquiries and management of public land (s 109).

In June 2012, the ACT Government adopted the Planning Strategy to replace the Canberra Spatial Plan. The Planning Strategy outlines long term planning policies for the future development of the ACT, up until the year 2030. The Strategy aims to identify areas where growth and change is needed, areas where specific planning is required and areas where investment and resources should be prioritised. An overview of the ACT Planning Strategy can be found on the [Environment and Planning Directorate's website](#).

The ACT Planning Strategy outlines five outcomes that it aims to achieve by 2030:

- Canberra will be a city where people are able to choose to live sustainably. This includes increasing housing by 50%, specifically attached housing whilst showing improving environmental trends in the ACT State of the Environment Report
- The citizens of Canberra will be able to enjoy a vibrant civic and cultural life, with well-established centres, open spaces and transport. This includes the development of the light rail, improving facilities in shopping centres and encouraging physical activity
- Canberra will have established a clean economy and a wide range of jobs. This includes: increasing ACT's proportion of jobs in the private sector, encouraging businesses to be environmentally sustainable and encouraging post-secondary education
- Canberra will have improved its public spaces and buildings. This includes encouraging buildings to achieve 6-star Greenstar rating, increasing the number of tourists visiting Canberra each year and increase the number of recognized developments and buildings in Canberra
- Canberra will be the centre of a region known for its natural beauty. This involves improving natural resource management, and decreasing land-take per person.

Large wind farms

Large wind farms (with five or more turbines, or 5 MW (megawatts) or more capacity) and very large solar generating facilities are subject to an EIS requirement, as they

fall into the 'impact track' under the *Planning Act* (s 123; sch 4). An application for a development proposal in the impact track must include a completed EIS, unless the minister exempts the application (s 127).

Wind farms located outside the ACT are not subject to ACT environmental impact assessment law.

Large solar farms

Large solar farms are also listed in Part 4.2 of the *Planning Act* as requiring an EIS. See below for more information on solar farms in the ACT.

Solar hot water and photovoltaic panels

Solar hot water and PV panels, where installed on a Class 1 building (a detached house or other attached dwelling) or a Class 10a building (a non-habitable structure such as a private garage, carport, or shed), are described as exempt building works. In other words, they are exempt from the usual requirements for planning approvals (*Planning and Development Regulation 2008*, Schedule 1, Reg.1.27) (see Chapter 3 in this Handbook for more information on ACT planning laws).

Sustainability in the Territory Plan

As discussed above, the *Planning Act* requires that the TP give effect to its objects in a way that gives effect to sustainability principles (s 49). The territory, the executive, a minister or territory authority must not do any act, or approve the doing of an act, that is inconsistent with the TP (s 50). The Act requires the TP to include a statement of strategic directions (s 51). This statement may contain a series of planning principles covering areas of national, regional and territory interest, including principles for sustainable development (s 52). The Statement of Strategic Directions (TP, pt 2) is also designed to guide environmental impact statements (EIS) (s 52). An EIS is taken into account in deciding development applications (s 208) (see Chapter 3 in this Handbook for information on development approvals).

Water and sustainability law

Water and ACT planning law

In order to improve the water efficiency of residential, commercial and industrial developments in the ACT, a Design Code attached to the TP has introduced certain requirements.

Code 11.10 of the TP, which commenced on 31 March 2008, deals with waterways. The *Water Sensitive Urban Design (WSUD) General Code* sets out requirements for water sensitive design and planning which apply to both land use planning and to development approval. The code integrates urban water cycle management considerations into planning law. It aims to minimise water use and to reduce stormwater runoff, by minimising disruption to natural drainage pathways and reducing impervious areas.

The WSUD code provides mandatory targets for reduction in mains water consumption and stormwater quality and quantity management. From March 2008, all new residential, commercial and industrial developments have been required to demonstrate how a 40% water efficiency target will be achieved. This target has been set to reduce mains water consumption by 40% from pre-2003 levels. This target must be achieved in all new developments and redevelopments, whether those developments are single residential, multi-unit residential, new residential suburbs and estates, re-development or in-fill development within the existing built environment, and commercial, industrial or institutional developments. Extensions and alterations that increase the floor area by more than 50% are also required to comply.

According to ACTPLA, the provision of a BASIX certificate (using Queanbeyan location data) for single and multi-unit residential developments in the ACT is acceptable evidence that the WSUD requirement for mains water use reduction will be achieved. The BASIX assessment requires information about the proposed development, such as site location, dwelling size, floor area, landscaped area and services. The proposal is scored according to its potential to consume less mains water than an average existing home.

Catchment protection

Impacts of development on water supply catchments are addressed via the TP and the operation of the *Planning Act*. Under the TP, this is the *Water Use and Catchment General Code* (Code 11.8). Under the *Planning Act*, this is Part 4.3, which requires an EIS for a proposal that is likely to have a significant adverse environment impact on a domestic water supply catchment or a water use purpose mentioned in the TP (see Chapter 8 in this Handbook for more information on water catchment management in the ACT).

Water tanks

Water tanks are exempt from requirements for development approval if the tank is of less than 20,000 litre capacity, is no more than 2.45 metres above natural ground level; and no part of the tank is located between a front boundary and a building line for the block. Other restrictions apply where part of the tank is within 1.5 metres of a side boundary or rear boundary. All others are required to go through the development application process (see Chapter 3 in this Handbook for more

information on DAs and Chapter 8 for more information on rainwater tanks in the ACT).

Water labelling

The Water Efficiency and Labelling Standards (WELS) Scheme is a cooperative scheme between the Commonwealth and the states and territories to provide for national water efficiency labelling and standards. This legislation, *the Water Efficiency Labelling and Standards Act 2005* was enacted both federally and in the ACT. The scheme applies to showers, taps, flow controllers, toilets, urinals, and clothes washing machines and dishwashers. The [WELS website](#) contains comprehensive information about the operation of the scheme and penalties that apply for breaches (see Contacts list at the back of this book). A second independent expert review of the WELS scheme was completed in June 2015 and its results will be taken into account in future policy and legislative steps to be taken by the Federal government.

The WELS Scheme has replaced the voluntary National Water Conservation Rating and Labelling Scheme (the 'AAAAA' Scheme) (see Chapter 8 in this Handbook for more information on ACT water law).

Climate change and the law

Introduction

In the ACT, the problem of climate change raises a host of complex, interconnected issues of energy supply and use, transport and urban sustainability.

The ACT has enacted the *Climate Change and Greenhouse Gas Reduction Act 2010* (ACT) ('*Climate Change Act*'), which sets emissions reduction targets for the ACT; requires regular reporting of emissions to the Legislative Assembly and establishes a Climate Change Council. In particular, the legislation establishes ambitious targets of:

- zero net greenhouse gas emissions by 2060 (known as the principal target, s 6)
- 40% reduction of 1990 emission levels by 2020 (s 7)
- 80% reduction of 1990 emission levels by 2050 (s 7)
- Peaking per capita emissions by 2013 (s 8).

An independent entity commissioned by the ACT Minister for the Environment ('the minister') must prepare an annual report that analyses progress in meeting the statutory targets (s 12). If the targets are not met, the minister must make a statement to the Legislative Assembly explaining why not and explaining what action will be taken for future years (s 13). The *Climate Change Act* also specifies twelve statutory functions of the minister in relation to climate change including the promotion of action to meet the ACT climate change targets (s 14).

The *Climate Change Act* creates the Climate Change Council, a body of up to nine people with skills and knowledge about climate change, that advises the minister on matters relating to reducing emissions and adapting to climate change (s 17(1)). Its primary focus is to provide independent advice and to consult with business and the community on climate change matters (s 17(4)).

The key sources of emissions of greenhouse gases in the ACT are the stationary energy sector and transport sector. The Interim ACT Greenhouse Gas Inventories for 2013-14 (p1) shows that 68% of total ACT emissions were from stationary energy, including consumption of electricity and natural gas. Typically, in the ACT, emissions from this sector come from small-scale combustion of fuels such as gas for heating of homes and offices, as well as on-site generation (although overseas jurisdictions have legislation to encourage the production of renewable forms of heat, the ACT is yet to introduce such a legislative innovation). Transport energy is the next largest sector and accounts for 25% of total emissions. ACT emissions started to fall in 2011-12, leading to an 8% reduction over two years. This meant the ACT met its first emissions reduction target, which was to peak per person emissions by 30 June 2013. The stationary energy and transport sectors accounted for most of the reductions that have been achieved in the ACT, due to lower demand.

The ACT government has published AP2: A new climate change strategy and action plan for the Australian Capital Territory. This contains strategies for the ACT to meet the emission reduction targets, and become a sustainable and carbon neutral community.

Electricity and energy law

At present, the majority of the ACT's electricity is produced from outside the territory; mainly from coal-fired generation in New South Wales and Victoria. Moving to a zero-emission future will require legal and policy intervention to avoid emissions of greenhouse gases from fossil-fuelled electricity generation. The ACT has legislated for a 90% renewable energy target by 2020 set out in a disallowable instrument under the *Climate Change and Greenhouse Gas Emission Reduction Act 2010* (ACT).

The ACT is physically linked to the national electricity grid and legally to the National Electricity Market (NEM), a wholesale market for electricity for the interconnected states of Queensland, New South Wales, ACT, Victoria, South Australia and Tasmania. Binding National Electricity Rules made under the *National Electricity Law* apply to the operation of this market. For historical reasons related to interstate cooperation on the passage of legislation, this national law is found in a schedule to the *National Electricity (South Australia) Act 1996* (SA). In the ACT, the *Electricity (National Scheme) Act 1997* (ACT) applies the National Electricity Law to the territory. The statutory objects of the *National Electricity Law* do not include environmental protection. Instead, aims of efficient investment and operation, price, safety and reliability of supply are paramount (s 7 of the Schedule to the *National Electricity (South Australia Act)*).

The Australian Energy Market Commission (AEMC) makes the rules for national energy markets and provides policy advice to governments regarding the NEM. A different body, the Australian Energy Market Operator (AEMO) administers and operates the national wholesale electricity market by determining (through a rolling auction) the most cost-efficient generators that are required to produce electricity to meet the demand of the market. It also manages the security of the interconnected power system allowing it to monitor electricity voltage and frequency and to adjust the energy supply when necessary.

In the ACT, the *Utilities Act 2000* (ACT) regulates the provision of electricity, gas, water and sewerage services. It gives powers to the Independent Competition and Regulatory Commission (ICRC) which regulates the Greenhouse Gas Abatement Scheme (see below) and the Energy and Water Consumer Council which, among other things, has the task of resolving complaints against energy and water utilities (see Contacts list at the back of this book).

In addition to the law applying to electricity and energy use, there have been a number of relevant policy documents (which are not legally binding). The climate change strategy and action plan, AP2 (i.e., Action Plan Two), published in 2012, builds upon the previous *Weathering the Change: the ACT Climate Change Strategy 2007-2025* to set up a 'strategic pathway for incremental implementation' (AP2, p vii). This policy, in conjunction with the *Climate Change and Greenhouse Reduction Act 2010* (ACT), establishes a target of 40% below 1990 levels of greenhouse gas emissions by 2020 and 80% by 2050.

AP2 sets out 18 action items. These include:

- six actions aimed at improving residential energy efficiency. Amongst these is the commencement of the ACT Energy Efficiency Improvement Scheme (EEIS) in the residential sector and assessment of the opportunities for extending the EEIS to the non-residential sector
- a promise to introduce legislation 'to require landlords to provide tenants with information on the energy efficiency of homes' by 2013 (see below)
- implementation of the Transport for Canberra policy, and a promise for the development of the Low Emissions Vehicle Strategy
- implementation of the ACT Waste Management Strategy 2011-2025
- development of large-scale renewable energy generation capacity, and a target of 90% renewables by 2020
- the assessment of potential risks of climate change to health, life and property in the territory with a new Territory Wide Risk Assessment
- a requirement for Status Reports in 2014, 2017 and 2020.

Federal climate change law

At the time of writing, the ACT is not subject to laws that force emitters of greenhouse gases (GHGs such as CO² and CH⁴) to pay for their pollution. Previously, the ACT was subject to climate change law in the form of a federal carbon emissions pricing law, the *Clean Energy Act 2011* (Cth), which established an Australian emissions trading scheme, preceded by a three-year transition period of a carbon tax. That Act (and five related laws) were repealed in July 2014 by the *Clean Energy Legislation (Carbon Tax Repeal) Act 2014* (Cth).

Prior to the Federal carbon pricing law, the ACT was a participant in the NSW baseline and credit emissions trading scheme under the *Electricity (Greenhouse Gas Emissions) Act 2004* (ACT), since repealed by the *Planning, Building and Environment Legislation Amendment Act 2013* (ACT) and that State-based carbon emissions trading scheme has since ceased operation.

The main elements of Federal climate laws now include the Carbon Farming Initiative (CFI), the Emissions Reduction Fund (ERF), and the *National Greenhouse and Energy Reporting Act 2007* (Cth) ('NGERS'). The *Carbon Credits (Carbon Farming Initiative) Act 2011* (Cth) was amended in 2014 to implement the Coalition's 'direct action' emissions policy—the purchase of domestic emissions abatement via an 'emissions reduction fund'. Under the ERF, the Federal Government intends to outlay \$2.55 billion to buy domestic greenhouse gas emissions reductions (including Australian Carbon Credit Units) and offsets by reverse auction. The ERF will fund not just emissions avoidance and carbon sequestration projects in the rural sector, but also industrial and commercial emissions reduction.

The *Carbon Credits Act* sets up a scheme, administered by the Clean Energy Regulator, for the issue of tradeable Australian carbon credit units in relation to eligible offsets projects. It is expected that the Commonwealth will purchase these carbon credits from private providers of offset projects. In order for an offsets project to be eligible, it must operate in Australia, using the methodology set out in the Act, and subject to offsets integrity standards set out in the Act. In particular, there is a safeguards mechanism designed to restrict large emitters of GHG from exceeding a historical emissions baseline. Details of the CFI and the ERF are set out in the *Carbon Credits (Carbon Farming Initiative) Rule 2015* and the *National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015*.

National greenhouse and energy reporting scheme

The *National Greenhouse and Energy Reporting Act 2007* (Cth) introduced a reporting framework for the reporting and dissemination of information related to greenhouse gas emissions and projects, energy consumption and energy production of those Australian corporations which are the largest greenhouse gas emitters and the largest energy consumers and producers.

The Act's objects include meeting Australia's international climate change reporting obligations under the *UN Framework Convention on Climate Change* and the *Kyoto Protocol*, and to create a single national reporting framework for energy and greenhouse gas emissions reporting.

The Clean Energy Regulator is required to publish on its website the totals of greenhouse gas emissions and net energy consumption as reported by registered corporations.

Federal renewable energy incentive law

The *Renewable Energy (Electricity) Act 2000* (Cth) encourages generation of electricity from renewable sources, to reduce emissions of greenhouse gases from the electricity sector.

The Act (as amended in 2009 and 2010) created a notional target ('RET') of 20% electricity from renewable sources by the year 2020. However, the non-statutory Warburton Review in 2014-15 led to substantial political pressure from opponents of renewable energy to reduce the target to a 'true' 20% of generation. In 2015, the RET legislation was amended to reduce the extent of the obligation to source extra renewable electricity. The required quantity of extra renewable electricity was reduced from 41,000 GWh per annum to 33,000 GWh/yr (*Renewable Energy (Electricity) Act 2000*, s 40). Obligations under the Act will remain in place until 2030 unless further amendments occur.

Small scale and large scale renewable energy generation are treated differently under the Commonwealth Act. There are two types of certificates that can be created – large scale generation certificates (LGCs) and small scale technology certificates (STCs).

The Federal law with payment of small-scale technology certificates (STCs) incentivises small-scale renewable electricity generators (such as households with solar systems). These certificates can typically be exchanged for an upfront discount on the purchase price of a solar system. Eligible systems include solar PV panel systems (presently under 100kWp capacity), small-scale wind, small-scale hydro, solar water heaters and air source heat pump water heaters under 425 litres capacity. Systems are also subject to other requirements specified by the Clean Energy Regulator.

The up-front discount on solar systems is available when solar system buyers assign the STCs to their solar installer and their associates who then take the responsibility for creating the STCs and decide whether to hold onto them or sell them. This may involve interaction with the STC clearing house established by the Act.

Renewable energy feed-in laws

The ACT has enacted renewable energy laws designed to create significant financial incentives for the generation of renewable electricity by households and businesses that feed electricity back into the grid. This form of legislation, known as a feed-in

tariff (FiT), has been effective in Europe in encouraging the deployment of renewable electricity generating capacity. In the ACT, the FiT has encouraged the installation of grid-connected solar energy from photovoltaic (PV) panels by offering payment for electricity returned to the grid.

There are two different 'feed-in tariffs' for small scale and for larger sized generators of renewable electricity: the *Electricity Feed-in (Renewable Energy Premium) Act 2008* (ACT) and the *Electricity Feed-In (Large-scale Renewable Energy Generation) Act 2011* (ACT). These laws require electricity distribution companies to pay eligible renewable generators specified 'feed-in' incentive rates per kilowatt hour (kWh) of electricity that they feed back into the network.

Small scale feed-in scheme

The ACT had a renewable electricity feed-in incentive law in force from March 2009 that was open to small-scale generators (the *Electricity Feed-in (Renewable Energy Premium) Act 2008*). However, this was closed to new applicants on 14 July 2011. The feed-in scheme was closed to new entrants after the installed total installed generation capacity of micro and medium sized generators in the ACT reached 30MW (s 5E).

The electricity retailer has an obligation, upon application, to pay any 'eligible entity' for the gross amount of renewable electricity generated by the eligible generator (ss 5F, 6). This is a 'gross' feed-in tariff, not a net FiT (see below).

Although it was known as a rooftop solar incentive, the premium payment was available to the occupiers of all premises (e.g., small business and community organisations) who were qualifying renewable electricity generators, not just generators who are domestic residential electricity customers.

The FiT premium is payable for a twenty year period from the date of connection (s 11). Importantly, the FiT is payable to subsequent owners or tenants of a property if it changes hands, provided that certain conditions are met. The new owner or tenant of a property with an existing eligible installation will be entitled to FiT payments for all renewable electricity generated (not just electricity exported to the network) for the remaining portion of the original 20 year feed-in tariff contract while they occupy the property or own the system. New owners or tenants must approach their electricity retailer. If they do not make a written application, they will not receive the payment.

Voluntary feed-in tariff rates

For solar PV systems connected in the ACT after 14 July 2011 there is no legal obligation on an electricity retailer to make feed-in payments. Payments that are offered are at the discretion of the retailer (i.e., 'voluntary'). There is no mandatory minimum rate that must be paid to this category of generators in the ACT. The rates offered can be altered or terminated at any time without notice. Unlike the legislated FiT, there is no guarantee that the FiT will be paid for a fixed time period (e.g., 20 years).

These 'voluntary' feed-in tariff rates are paid only on a net export basis (see below). The offer from the dominant retailer, at the time of writing, is to pay 7.5 cents per kilowatt hour exported to the network (which is less than half of the retail purchase price for electricity). At present, residential customers who want this payment can install up to a maximum of 10 kWp of generation capacity, and businesses up to 30 kWp capacity.

Under voluntary FiT in the ACT, solar connections are net metered. This is most beneficial for homes and businesses that are occupied during the day. For these customers, the majority of savings will come from self-consumption of solar electricity, by avoiding the purchase of more expensive electricity (e.g., at 16 or 20 c/kWh) from the grid during the daytime. The home or business will use the solar electricity it generates for appliances and lights. Any 'excess' solar energy is exported to the electricity network and the home or business owner will be paid for those exports. If consumers shift their biggest electricity loads, such as dishwashing and clothes washing and running swimming pool pumps to the middle of the day, they can maximise the benefit of solar systems under net metering.

New and disruptive technological innovations are coming to this field. Future changes to electricity pricing and regulation will be crucial in either encouraging or dampening the popularity of battery storage systems to capture solar generated electricity, and the rate of adoption of electric cars and motorcycles, all of which can be used to maximise the benefits of solar PV installations.

Large scale feed-in scheme

The *Electricity Feed-In (Large-Scale Renewable Energy Generation) Act 2011* (ACT) offers incentives for large-scale renewable electricity generation. Its objects include the promotion of large-scale facilities for the generation of electricity from a range of renewable energy sources in the Australian capital region and other places. The Act offers an incentive to renewable electricity generators for making electricity from solar or wind or another approved source if their equipment has a minimum generating capacity of more than 200kWp (s 6). (This would be equivalent to a minimum sized installation of 65 solar panels of 300W capacity each).

The incentive is offered to renewable electricity from solar and wind generation, although eligible electricity in the Act is defined as that 'generated by a large renewable energy generator connected to the interconnected national electricity system' and is electricity for which large-scale generation certificates are registered under the *Renewable Energy (Electricity) Act 2000* (Cth).

The large scale FiT law will reach capacity and close when a total level of generating capacity is reached. In other words, the Act closes the scheme of incentive payments when the total installed generating capacity of large generators under the Act reaches 550MW (s 9).

The legislation is designed so that the ACT environment minister will make FiT capacity releases to the market, either by competitive process, or direct grant, by means of a ministerial determination, being a disallowable instrument (s 10). At the time of writing, the minister had made determinations for two tranches of wind generation (200MW and 200MW) and one solar auction (40MW). In addition, one community solar tranche (1 MW at 20c/kWh for 20 years) and one next generation solar (i.e. solar not limited to PV, incorporating storage technologies) had been offered.

The commercial capacity releases are made on a competitive basis in the form of reverse auction. This means that the market makes offers to government to generate electricity at a nominated bid price, and the minister can determine which parties making offers will receive a 'FiT entitlement' (ss 8, 10), that is, the right to receive FiT support payments from the ACT electricity distributor (ss 17A, 18). The Act requires electricity distribution companies in the ACT to pay the FiT support payments to eligible generators (ss 18, 20).

Utility licensing

Any renewable generator in the ACT with generation capacity exceeding 30 MW is defined as a utility service, which requires a licence from the Independent Competition and Regulatory Commission of the ACT (ICRC) in order to operate, unless an exemption is obtained (*Utilities Act 2000* ss 21, 35).

Results to date

The ACT Government has targeted wind as part of its portfolio of energy sources in AP2. The AP2 program targets the installation of 583MW of wind energy generation by 2020 (Table 7 of AP2). This is part of AP2's target of reducing emissions by 40% by 2020 and 80% by 2050. More ambitious is the ACT's 90% renewable energy target by 2020 (set out in the *Climate Change and Greenhouse Gas Emission Reduction (Renewable Energy Targets) Determination 2013 (No 1)*).

The ACT Government announced in February 2015 the winners of one of its wind energy reverse auctions, with three new wind farms to be built outside of the ACT each winning a 20 year feed in tariff entitlement: the Ararat Wind Farm (Vic), Coonooer Bridge Wind Farm (Vic), and Hornsdale Wind Farm (SA).

Solar auctions of feed-in-tariff capacity have so far resulted in development of 3 solar farms generating a combined 40MW, and more large scale PV will be encouraged through the large scale feed-in tariff. In September 2012, the Royalla Solar Farm Pty Ltd was successful in the 'fast-track stream' of this process and officially opened in September 2014. Similarly, the Zhenfa Canberra Solar Farm One Pty Ltd and the OneSun capital 10MW solar farm have been selected in the regular stream.

Solar access law

Solar access laws are concerned with ensuring access to the sun's rays (for passive solar heating and for quality of life) and to prevent shading by neighbouring buildings.

Solar access is dealt with via building setback limits contained within the detail of the Territory Plan (TP), and particularly by Development Codes made under the TP, for Single Dwelling Housing and Multi Unit Housing. These aim to ensure that buildings are sited and of appropriate scale, height and length to ensure protection of a reasonable amount of privacy and solar access.

Variation 306 to the TP commenced on 5 July 2013, and this contained solar access provisions that limit overshadowing of neighbouring residences. This is achieved by limiting the height and location of a building using a building envelope. The Codes aim to ensure 'reasonable solar access' for dwellings on adjoining residential blocks. In particular, buildings must not shadow the windows of habitable rooms (other than bedrooms) of any approved and constructed dwelling on an adjoining residential block at noon on the winter solstice (21 June). They must also not overshadow the principal private open space of any approved and constructed residential dwelling on an adjoining block to a greater extent than a nominal 2.4 metre fence on the boundary at noon on the winter solstice.

The Codes now contain a 'solar fence' that is 2.4 metre high for a section of the boundary between the minimum front setback and a point 10 metre rear-ward. Other parts of the boundary have a solar fence of 1.8 metre (Single Dwelling Housing Development Code and Multi Unit Housing Development Code). For most of the block, the plane limits the southern part of the building envelope to not more than the shadow cast by a notional 1.8 metre fence on the boundary at noon on the winter solstice.

The rules also affect extensions and rebuilds in established areas. Controls on redevelopment are designed to prevent adverse impacts on adjoining properties including solar access impacts. However, in the Single Dwelling and Multi Dwelling Housing Development Codes, some sunlight access requirements were removed due to the 6-star energy rating requirement introduced in the Building Code of Australia.

The impact of the Variation 306 has been controversial, and some participants in the debate have called for change. There are difficulties in blocks that are sloping, and some homebuyers have resorted to excavating blocks in order to comply with the provisions. Further, some architects have commented that subdivision designers are drawing up too few rectangular blocks with the long sides facing north and south. There were technical amendments made to the TP (via TA 2013-12) that affected the implementation of Variation 306.

The solar access laws are incomplete in that they do not provide protection for PV or solar hot water systems. These provisions of the TP are not directed at protecting the operation of PV panels or solar hot water systems, but rather passive solar gain and amenity values. The question of solar access is also addressed in the *Tree Protection*

Act 2005 (ACT), which may be grounds for an exemption from the general prohibition on tree damaging activity in order to maintain solar access (s 19; see also Chapter 6 in this Handbook for more information on tree protection). An approval must be obtained from the Conservator of Flora and Fauna to remove or damage a protected tree (either a regulated tree or a registered tree). The conservator may grant approval where all reasonable remedial treatments and risk mitigation measures have been determined to be ineffective and provided that one of the approval criteria is met (s 21 of the *Tree Protection Act*). In the case of solar access, it is when the tree is substantially affecting solar access to the lessee's lease, or neighbouring lease, during winter between the hours of 9 am and 3 pm and pruning is not sufficient to remedy this (excluding remnant eucalypts). (*Tree Protection (Approval Criteria) Determination 2006 (No 2)* Schedule 1 Item 1(1)(e), approval to damage a regulated tree).

However, this exemption is not specifically drafted to protect the operation of solar equipment, for example, PV panels or solar hot water, and if it is a neighbour's tree shadowing one's property there remains the issue of obtaining the neighbour's agreement to apply for approval to modify/damage the offending tree.

Nuclear electricity generation

Federal law prohibits nuclear power plants in Australia. Under section 140A of the *EPBC Act*, the Federal Environment Minister must not approve an action consisting of or involving the construction or operation of a nuclear fuel fabrication plant, power plant, enrichment plant or a reprocessing facility. Within the law of the ACT, there are no provisions to prevent the establishment of a nuclear electricity generation industry, comparable to legislation in place in New South Wales (the *Uranium Mining and Nuclear Facilities (Prohibitions) Act 1986*) and in Victoria (the *Nuclear Activities (Prohibitions) Act 1983*). This could be rectified by amending the *Radiation Protection Act 2006* (ACT) to expand the list of 'radiation facilities' and 'prohibited radiation sources', for example to include 'nuclear installation for electricity generation'. However, the weak constitutional position of the territory means that its legislation could be overridden by a future Commonwealth parliament enacting a nuclear facilitation law (Constitution s 122).

Energy efficiency law

Energy efficiency in the ACT is regulated by the *Energy Efficiency (Cost of Living) Improvement Act 2012* (ACT). Its objects include encouraging efficient use of energy, reducing greenhouse gas emissions associated with stationary energy use in the Territory, reducing household and business energy use and costs and increasing opportunities for priority households to reduce energy use and costs (s 6).

This scheme known as the Energy Efficiency Improvement Scheme (EEIS).

The Act was to run for three years, from January 2013, but has since been amended to operate until December 2020 (s 12).

Part 2 of the Act sets up a means whereby the minister determines the reduction in greenhouse gas emission targets to be achieved by energy retailers (depending on their tier) and determines activities that are intended to reduce energy consumption.

Part 3 of the Act contains energy saving obligations imposed on energy retailers to achieve during the compliance period, and imposes penalties on retailers that fail to meet these obligations.

Previously, Federal law provided incentives for the largest consumers of energy to monitor and review their energy consumption. However, the *Energy Efficiency Opportunities Act 2006* (Cth) was repealed in September 2014 partly because of the de-regulatory agenda of the former Abbott government.

Energy efficiency in the Building Act 2004 (ACT)

Under the *Building Act 2004* (ACT) (*'Building Act'*) buildings must meet the minimum performance requirements contained in the Building Code of Australia (BCA) (Part J). The BCA now forms part of the National Construction Code (NCC). These requirements apply to all classes of buildings (Class 1 and 10 for housing; Class 2 for apartments; Class 3 for hotels; Class 4 for residences over other buildings; and Classes 5 to 9 for all other buildings). The BCA is produced by the Australian Building Codes Board (ABCB) to provide a nationally consistent minimum standard for buildings.

The mandatory minimum energy efficiency performance levels in section J of the BCA address issues such as building fabric, glazing, building sealing, air conditioning, lighting, power and hot water.

Building work requires approval under the *Building Act*, which is granted by a building certifier. A certifier must not issue a building approval if carrying out the site work would result in the contravention of the *Building Act* or another law in force in the ACT because of the design or siting or materials or use of the building (s 30).

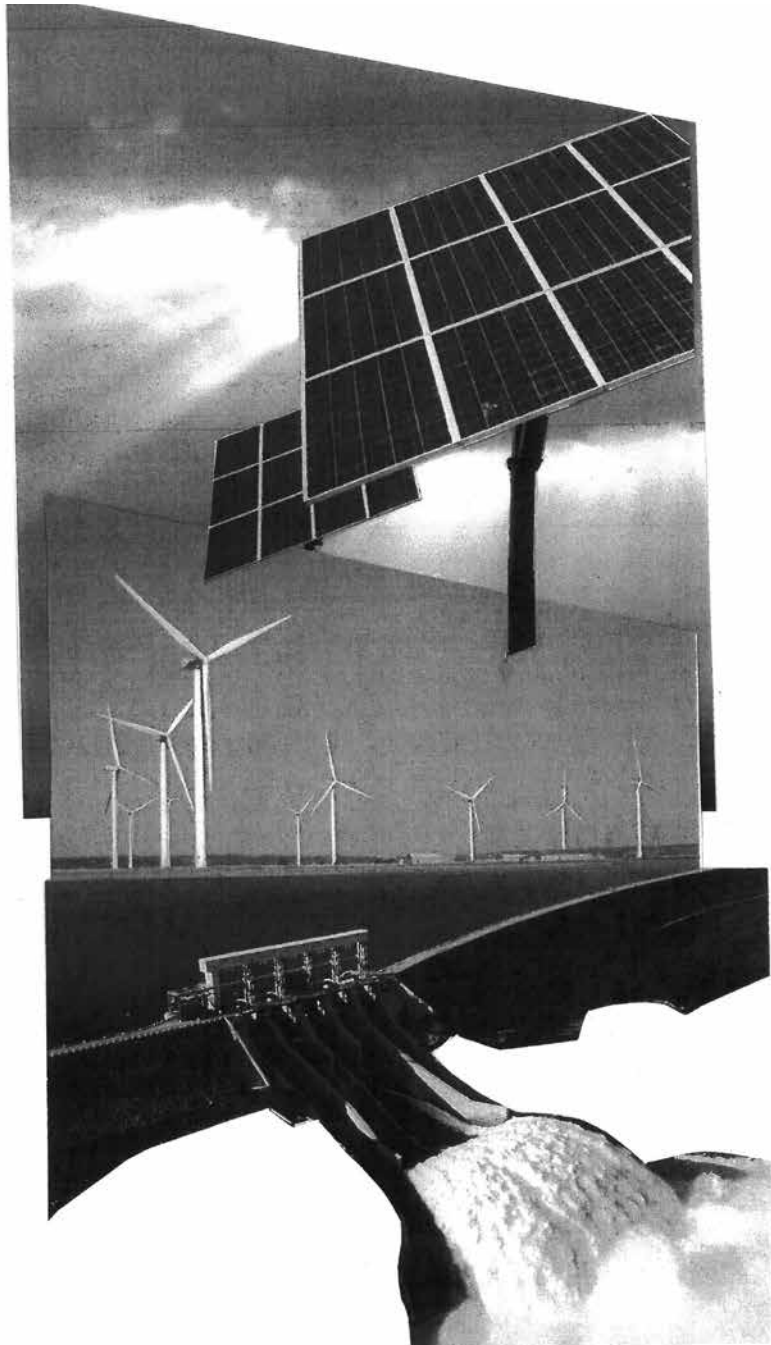
A building assessor in accordance with an approved code of practice must prepare an energy efficiency certificate (s 139C). If these performance levels are not demonstrated, a building certifier is entitled to refuse to grant a building approval.

The energy performance of a new building must be demonstrated when applying for building approval. In determining whether to give building approval, the building certifier will require proof that a building will meet the mandatory minimum energy efficiency standards (*Building Act* s 139C, *regulation* s 44AA).

The *Building Act* also requires the minister to make sustainability guidelines governing the sustainable use of materials for building, for example a guideline could prohibit the use of rainforest timber. It is then an offence to use the building material in contravention of the sustainability guidelines (s 143). However, at the time of writing, no such guidelines have been made.

Energy star ratings

A nationwide house energy-rating scheme applies in order to enable consumers and others to assess the thermal comfort of homes. Houses are rated between zero and ten stars, with ten being the highest rating score. Fewer stars indicate that it is likely that heating and cooling will be required to remain comfortable in the



building. A building with zero stars will do very little to make hot or cold weather more comfortable, whereas a six star rating indicates good, but not outstanding thermal performance. A home rated as ten star is unlikely to need additional heating or cooling.

Since 2010, all new residential properties in the ACT have been required to either achieve a six star rating directly or must fulfil the 'deemed to satisfy' elements of the BCA, which are said to be equivalent to six star rating.

The rating can only be derived using accredited computer software, when used by a NatHERS accredited energy assessor.

Australian Building Codes Board protocols describe the essential elements of house rating software that can be used under building law. In addition, the Nationwide House Energy Rating Scheme (NatHERS) sets out a framework enabling computer software tools to predict or estimate the thermal performance of a home. NatHERS defines the minimum information to be used by such software, and covers issues such as orientation, layout, construction materials, insulation and glazing. Use of accredited software to produce ratings provides a systematic way to rank the potential thermal performance of different residential buildings. The Federal Department of Industry, Innovation and Science administers NatHERS.

After 1 May 2009, ratings derived from so-called 'first generation' software rating tools were no longer recognised under the BCA, and ratings have to be obtained using one of the three packages of second-generation software, which all use the same underlying calculation engine designed by CSIRO. These packages are AccuRate Sustainability, BERS Professional and First Rate.

Energy efficiency ratings for commercial buildings

The ACT does not have its own energy-rating scheme for commercial, institutional and industrial buildings, but instead relies upon the Building Code of Australia (BCA) and specific federal legislation (below).

The energy efficiency requirements of non-residential buildings are set out in Section J of Volume 1 of the BCA. All new buildings in Australia must show compliance with BCA. Design documents for a development application need to be accompanied by a BCA Section J Report in order to obtain building and planning approval.

The *Building Energy Efficiency Disclosure Act 2010* (Cth) imposes obligations to disclose energy efficiency information for buildings and areas of buildings as determined by the minister. In particular, the Act prohibits the sale, lease or sublease of a 'disclosure affected building' without a registered building energy efficiency certificate (BEEC) (s 11). The certificate must include an energy efficiency rating for the building (specifically, a National Australian Built Environment Rating System (NABERS) Energy for offices rating) and a lighting energy efficiency assessment for the building or area (s 13A).

These requirements apply to a building owner who is selling or leasing office space with a net lettable area of 2000 square metres or more, and to tenants who are

subleasing part of their tenancy with a net lettable area of 2000 square metre or more. The law applies to 'constitutional corporations' that own or lease a disclosure-affected building, or affected area of a building.

Under the Commercial Building Disclosure Program, building owners and lessors are required to disclose the energy efficiency of their buildings, including a NABERS rating, when they are selling or leasing 2,000 square metres or more of office space. Mandatory disclosure of clear and credible information about a building's energy efficiency provides incentive in the marketplace to undertake commercial retrofits.

In the ACT, obligations under the *Building Act* apply and all new buildings must comply with the Building Code of Australia. An example of a voluntary scheme applicable in this context is Green Star, a suite of environmental performance rating tools developed by the Green Building Council of Australia (see Contacts list at the back of this book).

The question of a nationally consistent system of energy ratings in domestic housing has been a subject of some controversy. All states, except New South Wales, have followed the BCA approach. The NSW approach is designed to exceed the requirements of the BCA, Section J.

In NSW, the Building Sustainability Index (BASIX) is implemented through the development approval process under the *Environmental Planning and Assessment Act 1979* (NSW).

BASIX is a computer aided design tool used in NSW to improve housing design for sustainability. It analyses the design of proposed dwellings. It determines a score against water and energy targets. If the design does not meet specific targets, the development cannot be issued with a BASIX certificate. Without a BASIX certificate, the development will not get development approval from the consent authority.

BASIX measures the potential performance of new residential dwellings against sustainability indices. It applies to three aspects of sustainability:

- thermal comfort—heating and cooling loads
- appliance ratings—hot water unit, heating and cooling appliances
- water ratings—rain water tank size, rain water usage.

The NSW requirements under BASIX are in some respects more stringent than those applied in other jurisdictions, including the ACT. BASIX requires a 40% reduction in greenhouse emissions and a 40% reduction in water use from the current average. There are proposals on foot to increase these targets to 50%.

All three areas have minimum scores that all have to be achieved before the required BASIX certification can be generated. A BASIX certificate must be attached to a development application before a consent authority (council) can consider it. The targets can be met in a flexible manner by the designer making choices from a wide range of options, for example for water rating, by having rainwater tanks, water-saving fixtures or native plants for gardens. In terms of energy, options include improved insulation, passive solar orientation, and natural lighting.

The ACT energy star rating system follows the nationally consistent approach and only addresses the thermal performance of a building shell. Importantly, it does not address the energy efficiency of appliances fixed to the building such as hot water systems and cooling units. Only the water rating section of the BASIX system is applied in the ACT (see above).

Energy efficiency ratings and building alterations

Regulations under the *Building Act* limit the capacity of builders to perform work that would involve altering an existing building to reduce its energy efficiency performance levels (the building's EER) to a level that is less than the minimum requirements of the BCA (*Building (General) Regulation 2008* (ACT) r 6(3)).

If the building's existing star rating were to drop because of the works, the works would no longer be exempt from the requirement for building approval. A related point is that in the performance of building alterations or extensions, unaltered parts of a building need not comply with building code requirements regarding energy efficiency (r 28).

EER and properties

In order to create an indirect incentive for energy efficiency, the ACT has enacted home energy rating laws to guide homebuyers and renters towards selection of properties that are more efficient. These provisions are found in the *Civil Law (Sale of Residential Property) Act 2003* (ACT) and the *Residential Tenancies Act 1997* (ACT).

Energy efficiency ratings (EER) are used to describe the thermal efficiency, or otherwise, of houses in the ACT, with a rating between zero (worst) to ten (most energy efficient). Ratings must be prepared by an accredited ACT House Energy Rating Scheme (ACTHERS) energy assessor in accordance with the approved methodology (see below).

Since 1995 all designs for new dwellings have been required to achieve an EER of at least four stars. The requirement, since 2010, is for six stars.

Energy efficiency of properties for sale

Since 1999, those selling homes in the ACT have been required to disclose the energy rating in all advertisements and to supply the buyer with a copy of the rating assessment (an EER Statement). The seller must disclose the actual energy performance of all existing residential properties that have been occupied and are offered for sale.

There is no requirement for buyers to implement the recommendations of an EER Statement (found under 'Improving your Rating') nor is there any direct incentive offered, such as a rebate on stamp duty payable on the purchase of a property.

EER relates to the thermal performance of a building shell. The rating is governed mainly by the layout and orientation of the building, for example, relative to the

path of the sun, and the materials from which it is constructed. The rating does not address the efficiency of fixed, but changeable, appliances such as hot water and air conditioning systems. Nor does it include lighting systems and portable appliances like washing machines and TVs.

Energy efficiency of rental properties

Approximately 30% of the occupied dwellings in the ACT are rented. The law requires those offering residential properties for lease in the ACT to disclose an existing EER of the property in the advertisement to lease (*Residential Tenancies Act 1997* s 11A). It is an offence to advertise without disclosing the energy rating of a residential property offered for lease. If an EER exists, it is illegal to place an advertisement which states 'pending' or 'not available', or an estimate of the EER (s 11A)(3)).

However, it is vital to understand that under the law as it presently stands, the disclosure requirement only applies if an EER is actually in existence for the property in question. This is because the offence provision relates to disclosure of an '*existing* energy efficiency rating' [emphasis added] (s 11A). The provision appears not to create a legal obligation to obtain an EER, if none actually exists prior to offering a property for lease. This loophole is most likely to arise in relation to that portion of the rental stock built prior to 1996, which has not changed owners since 1999. This is because dwellings built after 1996 acquired an energy rating via building standard requirements, and others acquired an EER as a result of being sold after 1999 (when EER requirements for dwellings for sale came into force).

The existence of this loophole appears to contradict the Council of Australian Governments (COAG) agreement that mandatory disclosure of EERs for rental properties would be implemented by May 2011.

An attempt to rectify some of these issues, in the form of the *Residential Tenancies (Minimum Standards) Act Amendment Bill 2011*, did not pass the ACT Legislative Assembly when it came to a vote on 15 February 2012. The Bill, if it became law, would have required houses offered to let to meet a minimum energy efficiency standard of EER 2 by January 2013, and EER 3 by January 2015.

Lessor's obligations are spelt out in the *Residential Tenancies Act* whereby a lessor must provide the tenant with:

- a copy of an EER statement (if any)
- or a copy of an EER statement if one existed before the building work and the building work affects the EER (s 12(3)).

A 2014 report by Pitt & Sherry (Reporting the Energy Efficiency of Residential Tenancies in the ACT pp 5-6) expressed concern that there are no resources for the enforcement of the obligations, and that it is likely the number of rental properties advertised with an EER falls short of that required under the *Residential Tenancies Act*.

There is no requirement to obtain or disclose any EER for commercial or retail premises subject to the *Leases (Commercial and Retail) Act 2001* (ACT) ('*Leases Act*'). However, for larger commercial premises over 2000 square metres, there are obligations under Federal law. Further, the *Leases Act* prohibits a party in negotiations for a lease from making representations that they know, or should reasonably have known, is false or misleading in a material particular (s 36).

Efficiency of appliances

Minimum standards

Mandatory Minimum Energy Performance Standards (MEPS) set a minimum standard for energy performance that electrical appliances, lighting and other equipment must meet before they can be offered for sale, or before they can be used for commercial purposes in Australia. These standards are underpinned by the federal *Greenhouse and Energy Minimum Standards Act 2012* (Cth) and *Greenhouse and Energy Minimum Standards Regulation 2012*.

MEPS, which prevent the sale of least efficient imported appliances, are applied via state and territory legislation to refrigerators and freezers, mains pressure electric storage water heaters, single-phase air conditioners, selected three-phase air conditioners, selected distribution transformers, and commercial refrigeration. Further information is available on the [energy-rating website](#) (see Contacts list at the back of this book).

In the ACT, it is an offence for a trader to sell an article of electrical equipment that does not comply with the relevant energy efficiency standard under section 27 of the *Electricity Safety Act 1971* (ACT). The maximum applicable penalty is 50 penalty units, currently \$7500 for an individual and \$37,500 for a corporation. At the time of writing, a penalty unit for an offence committed by an individual was \$150 and for a corporation \$750 (*Legislation Act 2001* s 133).

Energy labelling

Throughout Australia, when refrigerators, freezers, washers, dryers, dishwashers and air conditioners (single-phase) are offered for sale they are required to carry the standardised energy rating label. In the ACT, this is required under section 27(2) of the *Electricity Safety Act*. The label shows a star rating which is determined from the energy consumption of the appliance. Three-phase air conditioners may carry an energy label if the supplier chooses to apply for one.

Transport and air pollution

Transport emissions are the second largest source of greenhouse emissions in the ACT after electricity emissions.

Although carbon dioxide is not itself explicitly listed as an air pollutant under the ACT's main pollution control law, the *Environment Protection Act 1997*, the Act defines 'pollutant' extremely broadly to include a gas 'that, when discharged, [or] emitted...may cause environmental harm.' This would appear broad enough to encompass CO₂.

Further, the *Energy Efficiency (Cost of Living) Improvement Act 2012* (ACT) lists CO₂ as a 'Greenhouse gas' (sch 2 item 1) and the objects of that Act include the reduction of greenhouse gas emissions from stationary energy use (s 6). This suggests that there is legislative intent to reduce CO₂ use, but emissions from transport are exempt. This is supported by the *Environment Protection Act 1997* which states that 'This Act does not apply in relation to...a pollutant emitted into the air by...a motor vehicle being driven on the road'(s 8).

Regulation 20 of the *Environment Protection Regulation 2005* (ACT) states that motor vehicle emissions are taken not to cause environmental harm if the motor vehicle complies with the *Road Transport (Vehicle Registration) Act 1999* (ACT). The *Road Transport (Vehicle Registration) Regulation 2000* (ACT) sets out vehicle standards including requirements for fitting and proper maintenance of emissions control systems. These are linked to standards made at a national level, which include Australian Design Rules (ADRs) for new vehicles. ADR 79/04 adopted in 2011, mandates EU standards Euro 5 with implementation from 2016. This will restrict allowable emission volumes beyond previous ADRs, as well as national fuel quality standards.

In Europe, Euro 6 standards require manufacturers of petrol and diesel cars to prove that all new vehicles sold, registered or put into service after September 2015 comply with the emission standards that address NO_x, carbon monoxide (CO), and particulate matter (PM). Regulation (EC) No. 443/2009 establishes average CO₂ emissions performance requirements of 130g CO₂/km for new passenger cars, to be reduced to 95g CO₂/km after 2020. By contrast, there are no minimum CO₂/km performance standards for Australian vehicles, only a requirement for vehicle labelling.

In Australia, manufacturers are permitted to sell Euro 4 vehicles until November 2016, putting many Australian cars two generations behind European products. A former federal government had intended to introduce Euro 5 standards by 2012 and Euro 6 standards from 2016, but changed course after apparent lobbying by the car industry. Implementation of Euro 6 emission standards are yet to be determined.

Diesel vehicles are subject to the *National Environment Protection (Diesel Vehicle Emissions) Measure 2001* ('Diesel NEPM') which sets a broad goal of reducing exhaust emissions from diesel vehicles, but does not set any specific or enumerated in-service emissions standards. Instead it relies on the Australian Transport Council or any successor body to undertake that task. The Diesel NEPM refers to an outdated 'ten second smoke rule' for 'smoky vehicles' and itself admits that 'a smoky vehicle

program which uses the ten second smoke rule cannot ensure detection of vehicles with excess emissions of NO_x, hydrocarbons (HC), carbon monoxide (CO) or particles' such as PM 2.5 and PM 10.

Electric vehicles in the ACT receive discounted vehicle registration fees which provide a benefit each time an EV has its registration renewed (20% discount excluding Compulsory Third Party Insurance, Road Rescue Fee, Road Safety Contribution, and Short Term Registration Surcharge). There are also concessions on stamp duty on registration known as the Green Vehicle Duty Scheme (GVDS), where "A" rated cars (environmentally leading edge models) will pay no stamp duty upon purchase (*Taxation Administration Act 1999* (ACT) s 139). As yet, additional incentives such as GST exemptions, access to bus lanes, free parking, free charging and purchase price fee-bates are only under consideration, but have been introduced in other jurisdictions such as California and Norway. There are currently no obligations in ACT planning law on developers of multi-unit or strata title or commercial and office developments to provide publicly accessible charging points in carparks.

At the time of writing, the Canberra light rail, known as Capital Metro, a plan for an integrated public transport network, is proposed for construction to commence in 2016, over two to three years. The first stage is projected to run between the City and Gungahlin with plans to extend to other major centres of the city. Two aims of light rail are to reduce greenhouse gas emissions from the transport sector and to encourage greater patronage of public transport. According to Capital Metro publicity, the vision is 'to boost Canberra's sustainable growth by changing and improving transport options, settlement patterns and employment opportunities'.

Conclusion

In comparison to other Australian jurisdictions, ACT laws are quite progressive in response to climate change and the promotion of renewable energy. However, the ACT's statutory framework for the protection of environmental sustainability is fragmented throughout several statutes and policy instruments, primarily in planning schemes and for energy and water efficiency.

Policy instruments such as the Action Plan Two (AP2) on climate change guides decision-makers in the ACT in sustainable planning and actions. However, despite these guiding policies, without a broader Act in place requiring decision-making across all portfolios in the territory government to have regard for the principles of ESD, they will remain a non-binding consideration only.