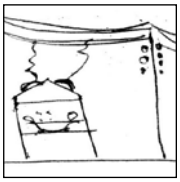


chapter eleven

Sustainability

Introduction

The most recent ACT *State of the Environment Report* (2007) found that in the ACT 'We are consuming natural resources at an unsustainable rate and, while efforts are being made to address this, more needs to be done as a matter of urgency, particularly given the correlation between consumption of resources and climate change.'

The report described increasing per capita use of electricity and gas, a high level of car use and a low level of public transport use. It concluded by stating: 'All this points to a city that is living and purchasing in an unsustainable way, with most of our goods being transported into our city.'

This chapter describes ACT laws which require action towards improved 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.

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 sustainability, particularly of the urban environment, 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. The law relating to questions of urban sustainability, energy and water use is found scattered throughout the statute book (see legislation register) and is not contained within an over-arching Sustainability Act which might have brought these questions together.

by
James Prest

On 7 November 2008 the ACT Department of the Environment, Climate Change, Energy and Water (DECCEW) was established (see Contacts list at the back of this book).

Sustainability and the law

Sustainability can be defined as using, developing and protecting resources in a manner that enables people to meet current needs without compromising the ability of future generations to meet their future needs.

Internationally accepted principles of sustainable development include intergenerational equity, the polluter pays principle, the precautionary approach, biodiversity conservation and improved valuation, pricing and incentive mechanisms. Implementation of these principles is referred to in s.9 of the *Planning and Development Act 2007* (ACT) (Planning Act) as the means by which sustainable development is achievable. For more information concerning the principles of sustainable development, the Brundtland Report, *Our Common Future,* published in 1987, sets out the principles in greater detail. 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 principles of ecologically sustainable development (ESD) are included in the objects clauses of a number of key ACT environmental laws. For example, the *Environment Protection Act 1997* has amongst its objects 'to promote the principles of ecologically sustainable development' (s.2(1)(g)). Sustainable development and sustainable management of resources is listed as an object of the *Utilities Act 2000* (s.3(e)) and the long title of the *Water Resources Act 2007*, 'an Act to provide for sustainable management of the water resources of the Territory, and for other purposes'.

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. Administrative acts seriously at variance with these principles would potentially be vulnerable to legal challenge.

Another requirement is contained in s.158A of the *Environment Protection Act 1997*, which obliges all departments and public authorities to include in their annual report a section on how their activities have accorded with sustainable development principles.

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 increase 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.

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, the sustainability policy *People Place Prosperity* (2003) and the sustainability report *Measuring Our Progress* (2004). In addition, it has published *No Waste by 2010*, the *Sustainable Transport Plan* and *Weathering the Change: the ACT Climate Change Strategy 2007-2025* as well as the *Think Water, Act Water Strategy* (all available on DECCEW or Department of Territory and Municipal Services (TAMS) websites – 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.

Climate change and the law

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 not yet enacted climate change legislation of the type that has been enacted in South Australia, New Zealand and the UK. That legislation typically sets out a series of greenhouse reduction targets and ideally includes mechanisms to ensure those targets are achieved.

The ACT's response to the problems of climate change, energy supply and urban sustainability has been a mixture of policy and law. Various Acts facilitate responses to the challenges of climate change and ecological sustainability. This chapter explains the laws for participation in the New South Wales greenhouse gas abatement scheme as well as laws mandating energy efficiency ratings of buildings.

The key sources of emissions of greenhouse gases in the ACT are the transport and stationary energy sectors. In 2005 the ACT's greenhouse gas emissions profile was dominated by stationary energy (72.3 per cent of total emissions), and transport fuels at 23.5 per cent, with waste (3.3 per cent), and other sources (0.8 per cent) making up the remainder (*Weathering the Change*, p.15). Emissions from the stationary energy sector include both direct combustion of fuels and electricity generation. Typically in the ACT, emissions from this sector come from small scale combustion for heating of homes and offices, as well as on-site generation.

ACT emissions appear small when compared with other Australian jurisdictions because very little electricity is generated in the ACT, with most of our electricity imported from interstate. The majority of Australian electricity production is from the burning of coal (83 per cent in 2006-07). As reported in *Weathering the Change* the average ACT household electricity consumption per person is well above the national average. Per capita emissions have increased by nearly 10 per cent since 1990. Much of the direct environmental impact of our fossil-fuelled electricity consumption is incurred elsewhere.

Motor vehicles and air pollution

Although carbon dioxide is not itself explicitly listed as an air pollutant under the *Environment Protection Act 1997*, the Dictionary in the Act defines 'pollutant' extremely broadly as including a gas that, when discharged, emitted…may cause environmental harm. This would appear broad enough to encompass CO_2. However, the Environment Protection Regulation

2005 states (r.20) that motor vehicle emissions are taken not to cause environmental harm if the motor vehicle complies with the *Road Transport (Vehicle Registration) Act 1999*. The Road Transport (Vehicle Registration) Regulation 2000 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. In 2005–06, ADR 79/01(Euro 3), came into force, further restricting allowable emission volumes beyond previous ADRs, as well as national fuel quality standards. Diesel vehicles are subject to the National Environment Protection Measure for Diesel Vehicle Emissions (the 'Diesel NEPM').

Electricity and energy law

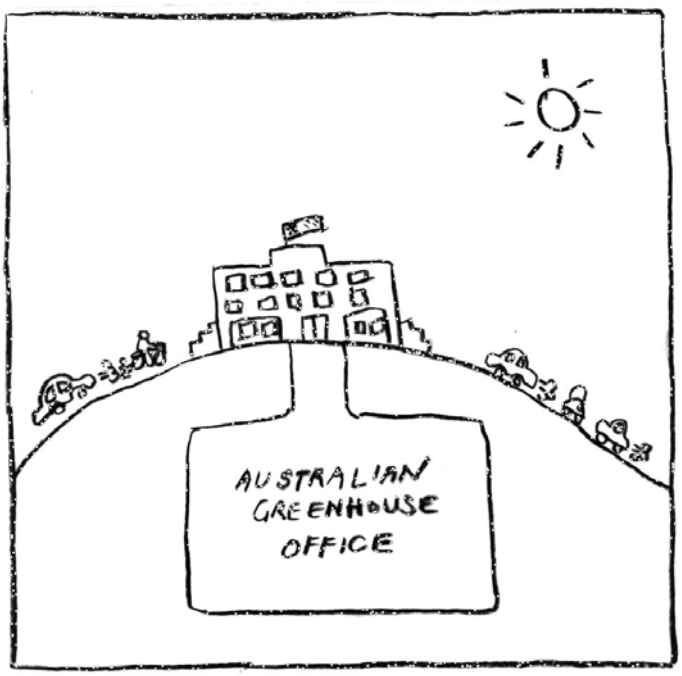
At present the vast majority of the ACT's electricity is produced from outside the territory, mainly from coal fired generation in New South Wales and Victoria. Greenhouse gases from such fossil fuelled electricity generation raise the question of legal mechanisms to move us to a zero-emission future.

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* 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 South Australian 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 National Electricity Market Management Company (NEMMCO) administers and operates the national wholesale electricity market and manages the security of the interconnected power system.

In the ACT, the provision of electricity, gas, water and sewerage services is regulated by the *Utilities Act 2000*. 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 are a number of relevant policy documents, most prominent of which is *Weathering the Change: the ACT Climate Change Strategy 2007-2025*, which contains a target for a reduction of 60 per cent of 2000 emission levels by 2050. It sets out a milestone of limiting greenhouse gas emissions in the year 2025 to the levels of the year 2000. Notably this milestone uses a different baseline year, of 2000, to that typically applied of 1990, by Annex 1 countries under the Kyoto Protocol to



the UN Framework Convention on Climate Change (UNFCCC). Thus it represents a less ambitious milestone. The first action plan under the ACT Climate Change Strategy sets out 43 separate action items, to be delivered between now and 2011. The most relevant are:

- a proposal to legislate for green power to be offered to all new electricity customers
- a commitment to introduce a renewable energy feed-in tariff
- a proposal to implement a renewable energy target (RET) in line with the New South Wales RET
- a commitment to participating in national emissions trading.

Greenhouse Gas Abatement Scheme

In 2004 the ACT passed laws in order to join the New South Wales Greenhouse Gas Abatement Scheme (GGAS), a mandatory emissions trading scheme which commenced operation in January 2003. It is a 'baseline and credit' scheme, as opposed to a 'cap and trade' scheme (such as under the proposed federal emissions trading scheme). Electricity retailers and generators that supply directly to retail customers earn emission reduction credits for bringing emissions below a nominated baseline (or benchmark) level of emissions, and are penalised if they fail to do so.

When the national emissions trading scheme commences, with the passage of federal laws, the NSW/ACT scheme will be phased out. In the meantime, the ACT *Electricity (Greenhouse Gas Emissions) Act 2004* (Greenhouse Gas Act):

- establishes greenhouse gas benchmarks for the electricity industry
- requires all ACT electricity retailers to procure a specified component of their electricity from accredited clean or green sources

- provides for the registration of certificates for activities that promote greenhouse gas emission reductions
- provides a financial incentive for reductions by imposing a penalty on greenhouse emissions above the benchmark
- provides the same regulatory and administrative framework as New South Wales.

The Greenhouse Gas Act sets annual territory greenhouse gas reduction targets, which initially declined for the years 2005 to 2007 but are identical for each year between 2007 and 2112 (s.7). It requires electricity retailers, also known as 'benchmark participants', to meet benchmarks based on their share of the electricity market (s.10). The retailer is required to purchase greenhouse reduction certificates equivalent to their benchmark.

Greenhouse abatement certificates are created and registered for actions that abate or offset greenhouse gas emissions and can be traded on the market and between participants. Eligible abatement actions include not just low emissions electricity generation but also improvements in the emissions intensity of existing electricity generation (s.23). Each certificate is equivalent to one tonne of CO_2e equivalent of greenhouse emissions abated or avoided by the activity (s.30). Certificates can be created through low-emission generation, efficiency improvements, and demand side abatement. Electricity retailers must surrender one certificate for each tonne of their benchmark at the end of calendar year to demonstrate that abatement or offset action has occurred. Benchmark participants who do not surrender sufficient abatement certificates to meet their mandatory benchmark are penalised by $12.00 per tonne of shortfall.

Compliance and regulatory aspects of the ACT law and scheme are performed by the ICRC,

Effective? Or a frightening example of what can go wrong?

Although described by TAMS as 'the most effective program in reducing ACT emissions', the GGAS was described by Dr John Kaye MLC as 'a poorly designed scheme' and 'a frightening example of what can go wrong in a poorly designed emissions trading market.' A report by the Centre for Energy & Environmental Markets at University of New South Wales states:

- Approximately 10 per cent of the 2005 total of certificates was created by two brown coal fired power stations in Victoria.
- Only 30 per cent of the 2003-05 total of certificates created related to activities in New South Wales that directly affect the emissions from electricity generation in New South Wales.
- Seventy per cent of the claimed abatement occurs in offset activities (primarily coal mine waste gas and landfill gas) not related to electricity supply and use in New South Wales.
- For a scheme whose stated intent is to reduce emissions from New South Wales electricity consumption, CEEM stated that the scheme 'lacks coherence and credibility' because it had only a limited impact on emissions intensity, because it has relied heavily on offsets and because of questions of 'additionality', that is, whether abatement would have occurred anyway or due to other government policies.

and administrative and computerised registry services are provided by the New South Wales Independent Pricing and Regulatory Tribunal (IPART).

Analysis and critique

Although the scheme is described in official documents as one of the most effective elements of the ACT's response to greenhouse problems, it is tied to the New South Wales GGAS which has come under criticism for being ineffective, particularly after the price of certificates under the scheme collapsed in late 2007. Until the commencement of a national emissions trading scheme under federal legislation, due in 2010, a series of transitional arrangements under the New South Wales scheme have been proposed.

Nuclear generation

At present there is nothing in ACT law 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 hostile Commonwealth parliament enacting a nuclear facilitation law (Constitution, s.122).

Renewable energy feed-in law

The ACT has enacted a renewable energy law in the form of a 'feed-in tariff' (FIT), the *Electricity Feed-in (Renewable Energy Premium) Act 2008*. This law is designed to create significant financial incentives for the generation of renewable electricity in the ACT. This form of legislation has been very successful in Europe, particularly in Germany and Spain, in encouraging the deployment of renewable electricity infrastructure. A FIT applies where renewably generated electricity is fed back into the grid. It encourages the installation of systems such as grid-connected solar energy (from photovoltaic (PV) panels) by offering long-term incentives in the form of payment for electricity returned to the grid by decentralised generators (see DECCEW website on Contacts list at back of this book).

The incentive is offered to renewable electricity from solar and wind generation, although other renewable sources can be specified via regulation. The rate payable is 3.88 times the default domestic retail electricity price (s.10(4) which gives a payment of $0.50 per kWh). This incentive is subject to annual revision, against statutory criteria. However each rate remains guaranteed for a 20-year period (s.11).

The electricity distributor has an obligation to connect the renewable generator to the network and must buy the electricity at the premium specified by the legislation, which varies according to the total capacity of the generator (s.6). If the total capacity of generation at a given address is more than 10 kWH but less than 30 kWh then the distributor is only obliged to pay 80 per cent of the premium rate (s.8(1)(b).

The legislation provides the FIT on the basis of total, that is, gross production metering, rather than net export calculation, which would involve payment only for electricity exported after on-site consumption. This means that a greater financial incentive is offered to the person feeding electricity back into the grid.

The premium payable is not stepped or differentiated according to the technology involved, a point of difference from European law. The premium payment is available to the occupiers of all premises who are qualifying renewable electricity generators, not just generators who are domestic residential electricity customers. Thus it also offers the feed-in incentive to commercial and organisational premises.

Present non-legislative arrangements offer incentives only on a net export basis and pay only approximately half of the retail rate and are only available to domestic customers for solar generation capacity less than 10 kilowatts.

Solar access law

The protection of solar access in the ACT is incomplete. It is dealt with via building setback limits contained within the detail of the Territory Plan (TP). 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. These provisions are not directed at protecting the operation of PV panels or solar hot water systems, but rather amenity values. Parts of the TP require new residential development to be sited to ensure that the main daytime living areas and private open space of a dwelling have a northerly orientation. For example, the TP provides that a single dwelling residential development must be sited to allow a minimum of three hours of direct sunlight onto the floor or internal wall of the main daytime living area of the dwelling between 9 am and 3 pm on 21 June (winter solstice). This is a mandatory requirement contained in development controls in the Residential Zones – Single Dwelling Housing Development Code made under the TP (see Chapter 2).

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 (see Chapter 6). An approval must be obtained from the Conservator of Flora and Fauna to remove or damage a protected tree. The conservator may grant approval where all reasonable remedial treatments and risk mitigation measures have been determined to be ineffective, provided that one of the approval criteria are met (s.21 of the Tree Protection Act). In the case of solar access it is that 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). 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 to seek approval to modify/damage the offending tree.

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
- development and building approval exemptions for renewable energy technologies such as 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 made 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). See Chapter 2 for a discussion of planning in the ACT, Chapter 3 for development approvals and Chapter 4 for environmental impact assessment.

Sustainable development in planning

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 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 for ACTPLA by means of a requirement (s.12) that it must exercise its functions in a way that, as far as practicable, gives effect to sustainable development.

Sustainability in the planning strategy

The Planning Act requires the 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 strategy is required to be consistent with the social, environmental and economic aspirations of the people of the ACT, in accordance with sound financial principles (ss.105 and 107). The Act requires that the strategy 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 or EIS and inquiries (s.109). On a

transitional basis, the *Canberra Spatial Plan* and the *Sustainable Transport Plan* are taken, for the moment, to be the planning strategy under the new law (s.440).

Sustainability in the Territory Plan

The Planning Act requires that the TP must give effect to its object in a way that gives effect to sustainability principles (s.49). The Act facilitates this by enabling the TP to be written to include within its statement of strategic directions a series of planning principles covering areas of national, regional and territory interest, including principles for sustainable development. The *Statement of Strategic Directions* is also designed to guide environmental impact statements (EIS) (s.52). When an EIS is produced it must contain a statement about its compatibility with the principles for environmental sustainability in the TP (s.208(1) and r.50(2)(e)).

Canberra Spatial Plan

A policy document, the Canberra Spatial Plan, sets out a proposal for an urban containment boundary at 15 km radius from the city and an intensification boundary of 7.5 km radius within which the majority of residential development would occur in the next 30 years. According to the *Climate Change Strategy* this would create a more sustainable Canberra by limiting sprawl, reducing the length of car journeys and by facilitating more cycling and walking.

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 and Schedule 4). An application for a development proposal in the impact track must include a completed EIS, unless the application is exempted by the minister (s.127).

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 Class 10a building (a non–habitable structure such as a private garage, carport, or shed), are described as exempt building works, and as such are exempt from selected approval requirements under the *Building Act 2004* (Regulation, Part 1.3, Item 23). Likewise they are exempt from requirements for planning approval (Planning Regulation (Schedule 1, Reg.1.27) (see Chapter 3).

Energy efficiency law

Building Act 2004

Under the *Building Act 2004* (ACT) buildings must meet the minimum performance requirements contained in the Building Code of Australia (BCA). For certain classes of buildings, this includes mandatory minimum energy efficiency performance levels. If these performance levels are not demonstrated, a building certifier is entitled to refuse to grant building approval.

The Building Act also provides a power for the minister to make sustainability guidelines, governing the sustainable use of materials for building (for example a guideline could be made to prohibit the use of rainforest timber). It is then an offence to use a building material in contravention of the sustainability guidelines (s.143). However at the time of writing no guidelines had 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. 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 five star rating indicates good but not outstanding thermal performance. A home rated as ten star is unlikely to need additional heating or cooling.

All new residential properties in the ACT must either achieve a five star rating directly or fulfil the 'deemed to satisfy' elements of the BCA, which are said to be equivalent to five star rating. The rating is derived using computer software, typically in the ACT, the First Rate package. Australian Building Codes Board protocols describe the essential elements of house rating software used under building regulations. The Nationwide House Energy Rating Scheme (NatHERS) sets out a framework enabling computer software tools to rate the potential energy efficiency of Australian homes. NatHERS defines the minimum information to be used by such software. From 1 May 2009, ratings derived from so-called 'first generation' software rating tools will not be recognised under the BCA, and ratings will have to be computed using second generation packages, for example, AccuRate, BERS Professional and First Rate 5. Accredited software programs and reports produced with them are entitled to display the House Energy Rating (HERS) logo. Consumers seeing this logo have some confidence that all reasonable steps have been taken to ensure that the software has been fully tested against a national energy rating software accreditation protocol.

At the time of writing, for commercial, institutional and industrial buildings, there is no mandatory rating scheme in the ACT. 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. In New South Wales, the Building Sustainability Index (BASIX) is an open access computer aided design tool used to improve housing design for sustainability. 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.

These New South Wales requirements under BASIX are in some respects more stringent than those applied in other jurisdictions, including the ACT. BASIX requires a 40 per cent

reduction in greenhouse emissions and a 40 per cent reduction in water use from the current average. 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 it can be considered by a consent authority (council). 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, rainwater tanks, water-saving fixtures, 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 and does not address the sustainability of appliances such as hot water systems and cooling units. Only the water rating section of the BASIX system is applied in the ACT (see below).

EER and building on

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 (its EER) to a level that is less than the minimum requirements of the BCA (r.6(3) of Building (General) Regulation 2008). If the building's existing star rating were to drop as a result 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 for sale

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

Energy efficiency ratings (EER) are used to describe the thermal efficiency or otherwise of houses in the ACT, with a rating between 0 (worst) to 6 (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 is now for five stars.

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.

Energy Ratings relate to the thermal performance of a building shell. The rating is mainly governed 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.

EER and rental properties

The law also requires those offering residential properties for lease in the ACT to disclose an existing EER of the property in all advertising (*Residential Tenancies Act 1997*, s.11A). It is an offence to publish an advertisement that does not state the energy rating of a residential property offered for lease. However it is vital to understand that as the law 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'. Thus the provision does not create any legal obligation to obtain an EER if none exists prior to offering a property for lease. If one exists, it is illegal to place an advertisement which states 'pending' or 'not available', nor an estimate of the EER. In 2008 the Office of Regulatory Services stated 'the ORS is concerned that many lessors are non compliant' (see Contacts list at the back of this book).

There is no requirement to obtain or disclose any EER for commercial or retail premises subject to the *Leases (Commercial and Retail) Act 2001*.

Efficiency of appliances

Minimum standards

Mandatory Minimum Energy Performance Standard, or 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 s.27 of the *Electricity Safety Act 1971* (ACT). The maximum applicable penalty is 50 penalty units ($5000 for an individual and $25,000 for a corporation).

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, see Electricity Safety Act s.27(2). 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.

Water and sustainability law

Introduction

The other chapter in this book relevant to water and sustainability is Chapter 8 'Protecting our water'.

Planning law aspects

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 requirements which commenced on 31 March 2008.

Code 11.10 of the TP deals with waterways and the Water Sensitive Urban Design (WSUD) General Code setting 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. A water efficiency target has been set to reduce mains water consumption by 40 per cent 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 per cent 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. The TP also controls the issue of water via its Water Use and Catchment General Code.

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 m 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 m of a side boundary or rear boundary.

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.)

The WELS Scheme has replaced the voluntary National Water Conservation Rating and Labelling Scheme (the 'AAAAA' Scheme).

Conclusion

As this chapter has shown, the ACT has a number of provisions scattered throughout the statute book which address the question of environmental sustainability, primarily through energy ratings, water efficiency measures and planning controls. However the extent to which these provisions might be said to provide a 'best practice' systematic and integrated framework for the attainment of improved levels of sustainability is certainly debateable. There is no overarching climate change response legislation, nor is there an overarching Sustainability Act which might require government decisions across portfolios to be made having regard to the principles of ESD.