Renewable Energy (Electricity) Regulations 2001 2001 No. 2

EXPLANATORY STATEMENT

Statutory Rules 2001 No. 2

Issued by the Authority of the Minister for the Environment and Heritage

Renewable Energy (Electricity) Act 2000

Renewable Energy (Electricity) Regulations 2001

The *Renewable Energy (Electricity) Act 2000* (the Act) provides the legislative framework for the implementation of the Government's mandatory renewable energy target, announced by the Prime Minister on 20 December 1997. The mandatory renewable energy target (the target) is designed to increase the amount of electricity in Australia which has been generated from renewable energy sources. By 2010, an additional 9,500 GWh of electricity will be required to be supplied from renewable energy sources, to raise the contribution that renewable energy sources make to Australia's electricity supply to around 12%.

The Act puts into place the target by establishing a legal requirement for wholesale purchasers (liable parties) of electricity to increase the amount of electricity they buy from renewable energy sources or pay a penalty [Parts 3 and 4]. The Act establishes the framework for renewable energy generators (eligible parties) to create 'renewable energy certificates' [Part 2] which can be sold to liable parties and surrendered [Part 5] to a Renewable Energy Regulator to demonstrate compliance with the requirements of the Act.

Sub-section 161 (1) of the Act provides that the Governor-General may make regulations prescribing all matters required or permitted by the Act to be prescribed or necessary or convenient to be prescribed for carrying out or giving effect to the Act. Sub-section 161 (2) provides that the draft regulations be available for public comment for a period of 30 days before the regulations are made. Further regulation making authorities are listed in Attachment A.

The purpose of the regulations is to provide additional detail to those parties participating in the market for renewable energy established by the implementation of the target. For example, a Renewable Energy Regulator will be appointed by the Minister for the Environment and Heritage to oversee the implementation of the Act and the achievement of its objectives. The regulations will, among other things, provide detail on how the Regulator will assess applications from power station owners wishing to be accredited as eligible renewable energy generators. The regulations are also able to provide a greater level of detail in determining a power station's ability to generate electricity which can contribute towards the achievement of the target.

While the Act specifies those renewable energy sources which can be used to achieve the target (eligible renewable energy sources), the regulations contain details on the special requirements which some renewable energy sources must meet for any electricity generated from them to be considered as contributing towards the achievement of the 9,500 GWh target.

Additionally, the regulations provide further detail to those parties who are obliged to purchase additional renewable energy, in order to achieve the target. This includes specifying the process for determining an individual person's contribution towards the scheme, or their liability under the Act. For example, the regulations provide detail on where a person must measure the amount of electricity which they buy, in order to determine the extent of their liability.

The regulations also contain information on the amount of electricity generated by small installations of wind, hydro and solar photovoltaic generators and the amount of electricity use which is displaced by the installation of a solar water heater. These calculations are essential for people who have installed these systems and want their solar water heaters and small wind, hydro and solar photovoltaic generators to count towards the achievement of the target.

The regulations commence on gazettal.

Details of the Regulations are set out in Attachment B.

Attachment

Details of the Renewable Energy (Electricity) Regulations 2001

Part 1 - Preliminary

Regulation 1 - Name of Regulations

This provides that the name of the regulations is the Renewable Energy (Electricity) Regulations 2001.

Regulation 2 - Commencement

This provides for the regulations to commence upon gazettal.

Regulation 3 - Definitions

This regulation defines a range of terms necessary for interpreting the provisions of the regulations.

Part 2 Renewable energy certificates

Division 2.1 Accreditation

Regulation 4 - Eligibility for accreditation

This regulation outlines the process for determining eligibility of power stations seeking to be accredited.

Sub-regulation 1 stipulates that power stations applying for accreditation, as an accredited power station under the *Renewable Energy (Electricity) Act 2000* (the Act), must use metering that accurately determines the amount of electricity generated by the power station. Power stations operating within the National Electricity Market (NEM) must use standard metering for the NEM, the requirements, and performance standards, for- which are outlined in the National Electricity Code (NEC). The NEC specifies metering standards for certain sized power stations and requires adherence with jurisdictional standards for other power stations. Power stations outside of the NEM must use metering that measures electricity to the levels of accuracy specified by relevant jurisdictional authorities.

For a power station to be accredited in accordance with the Act and these regulations, the power station must be operated in accordance with any relevant Commonwealth or jurisdictional requirements which outline conditions of operating a power station. These could include legislation or regulations relating to, for example, air or water quality, noise control or waste disposal.

Additionally, sub-regulation 2 states that the guidelines for determining which components of an electricity generation system that are considered to be part of a power station are contained in Schedule 1 to these regulations.

Sub-regulation 2 (b) states that additional guidelines for determining eligibility for accreditation and for revoking the accreditation of a power station are contained in Schedule 2 to these regulations.

Regulation 5 - 1997 eligible renewable power baselines

This regulation states that guidelines for determining a power station's 1997 eligible renewable power baseline are specified in Schedule 3 of these Regulations, in accordance with the requirement of Sub-section 14 (4) of the Act.

Division 2.2 Eligible renewable energy sources

Regulation 6 - Purpose of Division 2.2

This regulation states that the purpose of Division 2 is to prescribe criteria for the eligibility of the renewable energy sources specified in section 17 of the Act.

Regulation 7 - General requirements

This regulation outlines the general criteria that must be met for the use of all renewable energy sources, if any electricity generated from the source is to eligible under the Act.

Sub-regulation 1 states that where the use of an eligible renewable energy source requires approval by a Commonwealth, State, Territory or local government, the person responsible for the power station, who has been registered with the Renewable Energy Regulator in accordance with sections 9-12 of the Act, must be able to demonstrate that the approvals have been given and that they are current and in force.

Sub-regulation 2 specifies that the use of the renewable energy source must also meet the requirements of any applicable Government planning and approval processes and be ecologically sustainable, in accordance with the definition in Section 5 of the Act.

Sub-regulation 3 states that, to participate in the scheme established by the Act, eligible renewable energy sources must be used to generate electricity, or be a solar water heater which replaces non-renewable electricity. The criteria for solar water heaters displacing nonrenewable electricity are outlined in Regulation 11. Generated electricity, in accordance with the objectives of the scheme established by the Act and the Prime Minister's announcement of the scheme in the Safeguarding *the Future* statement of 1997, is intended to cover grid-based applications, such as generators of electricity for domestic, commercial and industrial uses.

Sub-regulation 4 states that the electricity generated is to be used directly as a power source. Electricity which is generated but not used, for example dissipated as heat, is not eligible for renewable energy certificates. Similarly, for solar water heaters where the solar panel generates hot water in excess of what would reasonably be expected to be the demand from a solar water heater, renewable energy certificates are not to be created for this unused energy.

Regulation 8 - Special requirements - wood waste

Regulation 8 outlines the criteria which must be met for wood products to be eligible under the Act.

Sub-regulation 1 states that the provisions of the clause apply to wood wastes as eligible energy sources under the Act. The regulation covers native forest wastes, plantation wastes and other wood products.

Native forest wastes

Sub-regulation 2 states that where the wood waste is sourced from a native forest, the biomass used for energy production, if it is to be eligible under the Act, must be sourced from a

harvesting operation for which the primary purpose of the harvesting was not to source biomass for energy generation.

Sub-regulation 3 (e) (i) states that the wastes must be a by-product from a harvesting operation where the primary purpose of the harvesting is a high value process. High value processes producing high value products from native forests are defined in subregulation 7 as sawlogs, veneer, poles, piles, girders, wood for carpentry or craft uses or oil products. Subregulation 7 also contains a definition of ecologically sustainable forestry management (ESFM) principles.

To meet these tests, the person claiming renewable energy certificates in respect of native forest biomass must be able to demonstrate that the harvesting produced higher rates of financial return from the high value products than for products not defined as high value products, as required by sub-regulation 5. That is, 51% of the revenue from the products of the harvesting operation must be gained from the specified high value products in order for the wastes to be eligible. Sub-regulation 3 (e) (ii) states that biomass produced from harvesting operations in native forests which are necessary for the management of the forest in accordance with ESFM practices, such as coppicing and thinnings, can also be eligible. However, this provision would not apply to the more wide scale harvesting of the forest, which is covered under subregulation 8 (3) (e) (i).

Sub-regulation 4 states that that native forest wood waste which is eligible under subregulation 8 (3) (e) must also be sourced from an area covered by a Regional Forest Agreement and in accordance with the ESFM principles in the RFA covering that region.

However, where the native forest is not covered by an RFA, the wood waste could be eligible if the harvesting meets all of the other specified eligibility requirements and the Minister for the Environment and Heritage is satisfied that the harvesting has been conducted in accordance with ESFM principles which are consistent with those required by an RFA.

Plantation wood wastes

Wood waste from a plantation must meet all of the following requirements to be eligible. The waste must be:

- a product of a harvesting operation, which could include thinnings and coppicing, which has been approved under all relevant Commonwealth, State or Territory planning and approval processes; and

- a product for which no higher value markets than biomass for energy production can be accessed for the products of the harvesting operation; and

- sourced from a plantation managed in accordance with Codes of Practice which have been approved by the Commonwealth under the authority of regulation 4B of the Export Control (Unprocessed Wood) Regulations; and

- sourced from a plantation which was not established on land cleared of native vegetation after 31 December 1989 for the purposes of establishing a plantation.

Other eligible wood wastes

Sub-regulations 8 (3) (a) to (d) specify the other wood wastes which are eligible.

Sub-regulation 8 (3) (a) states that biomass sourced from harvesting operations to control or eradicate non-native environmental weed species, where the Commonwealth, State or Territory Government has approved the harvesting, is eligible.

Sub-regulation 8 (3) (b) states that manufactured wood products or by-products of the manufacturing of wood products can be eligible. For example, wood pallets or wood packing cases would be eligible.

Sub-regulation 8 (3) (c) states that waste products from the construction of buildings or furniture, including wood off-cuts produced from these processes or timber from demolished buildings would be eligible.

Sub-regulation 8 (3) (d) states that sawmill residues, for example, sawdust, are eligible. The residues must be sourced from a sawmill to meet this criteria. Wood wastes not from sawmills must meet the other criteria specified in the regulations.

Regulation 8 outlines the criteria necessary for wood waste to be an eligible renewable energy source.

Regulation 9 - Special requirements - energy crops

Regulation 9 outlines the specific requirements which must be met for energy crops. An energy crop must be an agricultural or horticultural crop grown for the primary purpose of providing biomass for energy production. Similar to the definition of primary purpose in Item 8 regarding eligible wood waste, primary purpose is interpreted as meaning a crop where revenue from the sale of the crop comes predominantly from specified sources. In the case of energy crops, the primary financial return from the crop must come from the sale of biomass for energy generation.

Regulation 10 - Special requirements ~ ocean, wave and tide

This regulation stipulates that any electricity generated through the use of ocean, wave and tidal energy sources must occur within the territorial sea of Australia to be eligible under the Act. Territorial sea is defined in Regulation 3, by reference to Section 3 of the *Seas and Submerged Lands Act 1973.*

Regulation 11 - Special requirements - solar water heaters

This regulation states that solar water heaters will be eligible under the Act if their installation displaces the use of non-renewable electricity and creates a greenhouse gas benefit. The criteria for determining if the installation of the solar water heater displaces non-renewable electricity are outlined in regulation 20. Solar water heaters installed on new buildings will also be eligible. Solar water heaters replacing gas water heaters or gas-boosted solar water heaters are not eligible as this does not result in the displacement of electricity.

Additionally, sub-regulations 1(b) and (c) state that the solar water heater itself must be certified as compliant with the requirements of Australian Standard 27/12/1993 if it has a capacity of up to 700 litres, or be certified as compliant with the requirements of section 1.3 of Australian Standard 27/12/1993 if it has a capacity of more than 700 litres, for the installation of the solar water heater to be eligible.

However, sub-regulation 2 states that where the manufacturer can demonstrate to the satisfaction of the Regulator that a particular model of solar water heater is in the process of gaining certification against Australian Standard 27/12/1993 and where that certification is gained prior to 1 January 2002, that model of solar water heater can be eligible for renewable

energy certificates if the manufacturer of the solar water heater has calculated the amount of non-renewable electricity that will be displaced by the heater through a methodology which is approved by the Regulator. Where solar water heaters are eligible under these conditions, should certification against the Australian Standard not be gained by 1 January 2002, the solar water heater will no longer be eligible for renewable energy certificates.

Regulation 12 - Ineligible energy sources

This regulation contains a list of energy sources that are not considered renewable energy sources for the purposes of the Act. Any electricity generated by these sources is not eligible for renewable energy certificates.

Division 2.3 Eligible electricity generation

Subdivision 2.3.1 Amount of electricity generated

Regulation 13 - Working out electricity generation for a power station

This regulation states that the provisions contained in this Division must be applied when determining amounts of electricity generated by power stations.

Regulation 14 - General formula

This regulation prescribes the general formula that is to be used in determining the amount of electricity generated by a power station in a year. The formula is designed to calculate the amount of electricity available at certain points in the electricity supply chain and can be used by those power stations which dispatch all electricity generated into the transmission and distribution system, consume only a portion of their electricity or consume all electricity internally. Metering which measures the amount of electricity available at particular points in the electricity supply chain may be used if available. For example, a power station metering exported electricity at the connection point to the transmission or distribution network may use this metered data to account for auxiliary losses and fossil fuel use.

Regulation 15 - Fossil fuel component

This regulation states that where a power station uses any fossil fuel to generate electricity in combination with renewable energy sources, the electricity which is attributable to the use of the fossil fuel should be deducted from the amount of electricity generated by a power station, in accordance with Regulation 14. As fossil fuel based electricity is ineligible under the measure, this must be netted out before determining eligible generation.

Regulation 16 - Supplementary generation

This regulation prescribes the process for determining the auxiliary losses from a power station using non-eligible energy sources in combination with eligible renewable energy sources to generate electricity. Auxiliary losses are defined in regulation 3 as the amount of electricity used internally by a power station or small generating unit to generate electricity. Where eligible and non-eligible fuels are used to generate electricity, the auxiliary losses cannot be totally allocated to either the fossil fuel or renewable based electricity generation. Auxiliary losses should be allocated to each, in proportion to the amount of electricity generated by each fuel source. For example, if 45% of output from a power station is from a renewable energy source, and 55% from a fossil fuel, then 45% of auxiliary losses should be attributed to the renewable generation and 55% to the fossil fuel generation.

Regulation 17 - Hydro-electric generation

This regulation outlines how to determine generated electricity in interconnected hydro-electric systems, as defined in regulation 3.

Sub-regulation 1 states that the requirements in sub-regulation 2 apply to those interconnected hydro-electric systems where the Regulator has established a 1997 renewable energy baseline for the system as well as the individual power stations in the system, and one power station in that system has generated less electricity in a year than its 1997 renewable power baseline.

Where the events in sub-regulation 1 have occurred, sub-regulation 2 states that the 1997 renewable energy baseline for the system applies to the electricity generated in that year from all of the power stations that form part of the interconnected hydroelectric system.

Sub-regulation 3 states that sub-regulation 2 does not apply, however, if a power station in the interconnected hydro-electric system falls below its 1997 renewable energy baseline due to technological or environmental restrictions that impact on the operation of the power station.

For example, where one power station out of tour in an interconnected hydro-electric system generates below its individual 1997 renewable energy baseline, and the remaining three generate above their individual baselines, and this generation pattern cannot be explained by technological or environmental factors altering the generation of the power station, the system baseline shall apply and renewable energy certificates will only be able to be validly created for any generation above the system baseline. However, if the reduced generation from one power station is a result of power station failure (as an example of a technological restriction) or natural causes (as an example of environmental restrictions), individual power station baselines will apply and renewable energy certificates can be created for above baseline generation from each individual power station.

Sub-regulation 4 specifies that where the hydro-electric power station uses pumped storage to raise water to a water storage prior to its release through the power station, and where the pumping process consumes electricity, the power station is to include the electricity used for pumping as an auxiliary loss when determining the amount of electricity generated by the power station or system.

Regulation 18 - Electricity generation return

This regulation outlines the information, additional to that outlined in paragraph 20(2)(d) of the Act, that the operators of accredited power stations must provide to the Regulator each year. Failure to submit a return can result in revocation of accreditation in accordance with Schedule 2 of these regulations.

Subdivision 2.3.2 Solar Water Heaters

Regulation 19 - Creation of certificates for solar water heaters

This regulation outlines the criteria that the installation of a solar water heater must meet to be eligible for renewable energy certificates.

Sub-regulation 1 defines the instances where a solar water heater is taken to displace non-renewable electricity as required by Regulation 11. For a solar water heater to displace non-renewable electricity, it must displace an electric hot water system or replace, and use less electricity, than an electric-boosted solar water heater.

However, sub-regulation 2 states that a solar water heater shall not be considered to be displacing non-renewable electricity if the electricity it displaces is generated mainly from renewable energy sources. For example, a solar water heater displacing an electric water heater, where the electric water heater is power by electricity generated predominantly using wind generators, would not be considered to be displacing non-renewable energy and is therefore not eligible for renewable energy certificates.

Sub-regulation 3 states that renewable energy certificates may be created for the nonrenewable energy displaced by the solar water heater. Certificates can only be created once during the life of a solar water installation and must be claimed within six months of the installation of the solar water heater. The number of certificates created for a solar water heater is dependent on its model type, size and geographical location. The number of renewable energy certificates which can be claimed in respect of eligible installations of solar water heaters is outlined in Schedule 7.

Sub-regulation 4 outlines the procedure for determining the number of renewable energy certificates that can be claimed when a solar water heater replaces an existing solar water heater, where that installation is eligible to receive renewable energy certificates. If the solar water heater being replaced was eligible for renewable energy certificates and certificates were created in respect of this installation, the new solar water heater is eligible for the number of certificates which could be created for the new installation less the number of certificates that were created for the water heater being replaced.

However, if no renewable energy certificates were created for the solar water heater being replaced, the regulation states that the number of renewable energy certificates which can be claimed for the new system is the number allocated to the new system, as outlined in Schedule 7, less the number which could have been claimed for a similar installation. Where the number of renewable energy certificates for a similar installation has not been determined, the number of certificates to be deducted should be the number of certificates which could have been claimed for the least efficient system in the same zone, as outlined in Schedule 7.

Sub-regulation 5 states that solar water heaters installed on new buildings are taken to replace electric systems with similar characteristics.

Subdivision 2.3.3 Small Generation Units

Regulation 20 - Creation of certificates for small generation units

This regulation states that the number of renewable energy certificates that may be created for small hydro-electric systems, small installations of solar photovoltaic panels and small wind turbines are outlined in Schedules 4 to 6 respectively. The schedules outline the number of certificates which could be claimed for different capacity small generation units installed in different regions where the water, solar and wind resource availability differs.

The schedules have a limit of 10 kW installed or 25 MWh of generation, whichever occurs first. Systems which pass these cutoffs must install metering of their output to be able to claim renewable energy certificates.

Sub-regulation 2 states that the number of certificates as listed in Schedules 4-6 must be rounded down to the nearest whole number, unless the amount of generated electricity is greater than or equal to 0.5 MWh but less than one full MWh, in which case 1 certificate can be created.

Sub-regulations 3 and 5 outline the default resource availability which has been included in the certificate calculations for wind and hydro systems. However, the number of certificates which can be created for installations in regions with higher resource availability have also been

calculated, but can only be claimed where the higher resource availability can be demonstrated to the Regulator.

Sub-regulation 4 outlines the regions established for solar photovoltaic panels which determine the different number of certificates which can be claimed for small solar panel installations in different areas with different solar availabilities.

Sub-regulation 6 states that parties wishing to claim certificates in respect of the installation of small generation units can either create their certificates annually or upfront in bundles of 5 years. Where the creator of the certificates elects to claim certificates each 5 years, subsequent allocations of certificates cannot be claimed until the Regulator has been provided with sufficient information to satisfy them that the system is still installed and is likely to remain operational for the next 5 year period.

Part 3 Acquisition of electricity

Regulation 21 - Amount of electricity acquired

Regulation 21 prescribes the point at which a liable entity must meter electricity transfers in order to determine the amount of relevant acquisitions for which it is liable under Section 31 of the Act. Generally, the regulation states that liable parties are responsible for ensuring that adequate metering is installed at the points where metering is required to allow the liable party to determine the sum of their relevant acquisitions. These points can be different depending on the type of customer, jurisdictional metering requirements and dispatch characteristics of the generator.

In NEM regions liabilities can be determined using the following principles. For non-NEM regions, equivalent points should be used as much as possible for equity. The amount of electricity that is considered a relevant acquisition for each liable party is the electricity transfers, for which they are responsible, measured at the boundary between: 1) a transmission network and a distribution network; 2) a transmission network and a customer; 3) a distribution network and a customer; or 4) a co-located generator and load.

	Point of acquisition	**Measuring point**	**DLF**
1	Transmission/distribution network	The network connection point as defined in the National Electricity Code (NEC). (the boundary between the networks).	Yes
2	Transmission connected customer	The customers network connection point.	None
3	Distribution connected customer	Network coupling point as defined in the NEC.	Yes
4	Co-located generator and load	Boundary between the generator and load.	None

The distribution loss is the amount of additional energy required at the transmission/distribution network boundary point to provide an additional unit of energy at the network coupling point, (the point of end use), and is expressed as a coefficient called the distribution network loss factor. Electricity metered at the network coupling point is to be adjusted using the distribution network loss factor coefficient assigned to that metering point by NEMMCO or adjusted in accordance with the equivalent loss factor in non-NEM jurisdictions.

Examples of 'how Regulation 21 is to be *applied: (1) For a transmission/distribution network connection point serviced by: (a) one liable party the amount of relevant acquisitions is the amount of energy transferred from the transmission network (TN) to the distribution network

(DN) metered at the boundary point between the two networks; or (b) more than one liable party the amount of relevant acquisitions will be calculated in the following way:

(i) for liable parties other than the host retailer (as defined in the National Electricity Code), the amount of energy metered at the contestable customer metering point multiplied by the Distribution Loss Factor assigned to the metering point under the provisions of the National Electricity Code or equivalent arrangements in non-participating jurisdictions; and

(ii) for the host retailers, the residual component of the total energy transfer metered at the TN/DN boundary excluding the adjusted energy in part (a)

(2) For customers connected directly to the transmission network the relevant acquisition will be the quantity of energy metered at the liable entity's network connection point. (3) For relevant acquisitions metered at the network coupling point the amount of relevant acquisition is the electricity metered at the contestable customer metering point multiplied by the Distribution Loss Factor assigned to the metering point under the provisions of the National Electricity Code or equivalent arrangements in non-participating jurisdictions. (4) For colocated generators and loads, the relevant acquisition will be the quantity of electricity metered at the liable entity's network connection boundary between the two entities or at the point where the financial transfer of electricity is determined.

There may be other examples of transfers of electricity that would be considered relevant acquisitions under the Act. In such situations it may be the case that other points require metering in order to determine the amount of relevant acquisitions for which an entity is liable.

Regulation 22 - Capacity of grids

This regulation outlines the requirements for determining whether an electricity grid exceeds the 100 MW installed capacity requirement for liability, in accordance with Subsection 31 (3) of the Act. The sum of the installed capacity of all power stations linked to the grid is to be counted, except where the installed capacity operates as standby plants or are privately owned domestic generators. The definition of standby plant is outlined in Regulation 3 and only those plant meeting those criteria can be considered for this exclusion.

Part 4 Renewable energy certificate charge

Regulation 23 - Renewable power percentage

This regulation states that the renewable power percentage for 2001 is 0.24%.

Part 5 Statements and assessments

Regulation 24 - Annual energy acquisition statements

This regulation outlines the additional information which a liable entity, as described in the Act, is to provide annually to the Regulator, in accordance with section 44 (2) of the Act.

Regulation 25 - Annual renewable energy shortfall statements

This regulation outlines the additional information which a liable entity, not meeting their obligations in a year, must give to the Regulator each year, in accordance with section 46 (2) of the Act.

Part 6 Administration

Regulation 26 - Seizing and disposing of property

This regulation prescribes the process under which an authorised person may seize and dispose of the property of a deceased person, in order to recover any outstanding renewable energy shortfall charge incurred by the deceased person.

Sub-regulation 2 states that seized property must be securely stored until disposal. Subregulation 3 states that land sales must comply with the laws of the jurisdiction in which the land is located. Sub-regulation 4 states that an authorised person can dispose of as much of the property as is necessary to raise the amount of money owing to the Commonwealth, as outlined in subsection 94(1) of the Act. Subregulation 5 states that the sale of the property must take place as soon as possible after seizure of the property takes places. Sub-regulation 6 allows the authorised person seizing and disposing of the property to retain sufficient money from the sale of property to cover any costs involved with seizing and disposing of the property. The remaining money must be given to the Regulator. Sub-regulation 7 states that the authorised person must inform the Regulator if the sale of all seized property does not raise sufficient funds to cover the amount owed to the Commonwealth.

Regulation 27 - Identity cards for authorised officers

This regulation prescribes the information that must be contained on identity cards for any individuals acting as an authorised officer for the Regulator.

Regulation 28 - Fees

This regulation lists the registration fees which are applicable to:

- applications for registration as a registered person;
- applications for accreditation as an accredited power station;
- the registration and surrender of renewable energy certificates; and
- the Regulator's administration costs incurred when repaying renewable energy shortfall payments, after a shortfall has been extinguished.

Regulation 29 - Remuneration of Regulator

This regulation states that the Regulator is to be paid remuneration and allowances of the same rate as an Executive Manager in the Australian Greenhouse Office.

Schedule 1 Components of an electricity generation system

Item 1 of Schedule 1 - General

Sub-item 1. 1 of Schedule 1 outlines the components of an electricity generation system which are to be taken to be part of a power station, for the purposes of the Act. The regulation specifies that any component of an electricity generation system, regardless of the ownership of the component, which functions to transform an eligible renewable energy source into electricity, shall be considered to be part of a power station. This includes infrastructure, such as information technology and buildings. These components determine the boundaries of a power station and the electricity generated and used by the whole power station shall be considered when determining eligibility for renewable energy certificates.

Sub-item 1.2 of Schedule 1 states that where the electricity generation system receives a supplementary power supply, such as electricity generated from non-eligible fuel sources, the components of the supplementary power supply system are also taken to be part of the electricity generation system, or power station. Where the supplementary power supply uses fossil fuels, this is not to be counted as eligible generation for which valid renewable energy certificates can be created.

Sub-item 1.3 of Schedule 1 states that where fuel is processed in the system, or within the boundaries of the power station, the fuel processing and delivery components are considered part of the power station. For example, where a fuel supply is crushed on site and transferred into the power station on conveyor belt, these fuel processing and delivery components are considered part of the power station. However, energy used to transport a renewable energy source to the power station from outside the boundary of the power station, for example, road transport of biomass from the site of harvesting, is not considered to be within the boundaries of the power station and the energy used in this process does not need to be attributed to the power station.

Sub-item 1.4 of Schedule 1 states that where interconnected hydro-electric power stations are supplied by a common long-term storage dam, all of the power stations which are interconnected and affected by the release of water from the dam, may be considered to be part of the one electricity generation system.

Sub-item 1.5 of Schedule 1 states that where a power station includes components that are not specified in the Schedule, the components can still be considered to be part of the power station and the lists included in the schedule do not limit the components which can be considered to form part of the power station.

Item 2 of Schedule 1 - Bioenergy

Sub-item 2.1 lists components which may be used for generating electricity in power stations using bioenergy sources.

Item 3 of Schedule 1 - Co-firing

Sub-item 3.1 states that any power station using fossil fuel in combination with an eligible renewable energy source is to incorporate all the components used in the generation of electricity, irrespective of whether the components are fuelled by fossil fuel or eligible renewable energy source, within the power station boundary.

Item 4 of Schedule 1 - Fuel cell

Sub-item 4.1 outlines a list of components that may be considered to be a fuel cell.

Item 5 of Schedule 1 - Geothermal

Sub-item 5.1 outlines a list of components that may be considered to be used by a geothermal power station.

Item 6 of Schedule 1 - Hydro-electricity

Sub-item 6.1 outlines a list of components that may be considered to form part of a hydro-electric power station.

Item 7 of Schedule 1 - Ocean, wave and tide

Sub-item 7.1 outlines a list of components that may be considered to form part of an electricity generation system using the ocean, waves or tides to generate electricity.

Item 8 of Schedule 1 - Solar electricity generation

Sub-item 8.1 outlines a list of components that may be considered to form part of a solar powered electricity generation system.

Item 9 of Schedule 1 - Solar water heaters

Sub-item 9.1 specifies that a solar water heater may include the components of a water heater outlined in Australian Standard 2712-1993.

Item 10 of Schedule 1 - Wind

Sub-item 10.1 outlines a list of components that may be considered to be used by a wind generator.

Schedule 2 Accreditation eligibility guidelines

Item 1 of Schedule 2 - Revocation of Accreditation

This item outlines potential conditions that may lead to revocation of accreditation for a power station, in accordance with Regulation 4 (2) (b).

Item 2 of Schedule 2 - Application for re-accreditation

This item states that a registered person responsible for a power station for which the Regulator has revoked accreditation should not apply for re-accreditation until they can demonstrate to the Regulator that the circumstances which caused the accreditation of the power station to be revoked have been remedied and are unlikely to recur.

Schedule 3 Guidelines for 1997 eligible renewable power baselines

Item 1 of Schedule 3 - Power stations starting electricity generation after 1 January 1997

Sub-item 1.1 refers to power stations using an eligible renewable energy source and generating electricity for the first time after 1 January 1997. A power station meeting these criteria is to have a 1997 eligible renewable power baseline of nil. Any electricity generation from the power station, supplied to the appropriate measurement point (see regulation 14), may be eligible for renewable energy certificates, in accordance with Section 18 of the Act.

Item 2 - Default baselines

Sub-item 2.1 specifies that for power stations that generated electricity prior to 1 January 1997, the baseline for the power station is to be the average of the annual electricity generation from eligible renewable energy sources over the reference period, being the three years of generation immediately prior to 1997. The amount of electricity generated in each of the years 1994 to 1996 is to be calculated in accordance with Subdivision 2.3.1 of these regulations.

Sub-item 2.2 states that where the level of electricity generation was not determined in accordance with the measurement principles contained in these regulations, it should be

estimated from measurements of generation which were taken, adjusted in accordance with the principles contained in Subdivision 2.3.1 of these regulations.

Sub-item 2.3 relates to the method of determining eligible renewable power baselines for power stations that did not generate electricity continuously during the three years immediately prior to 1 January 1997.

If a power station generated electricity for 24 months over the period 1 January 1994 to 31 December 1996, the Regulator may extrapolate the generation data measured for that power station, in order to determine generation levels for the whole of the period. This data would then be used to determine the power station's baseline. However, if the existing data is unable to be extrapolated, the registered person seeking accreditation of the power station may seek to have the output of the power station modelled and submit the outcomes of the modelling to the Regulator for use in determining a baseline.

For a power station that generated electricity for less than 24 months over the period 1 January 1994 to 31 December 1996, the registered person seeking accreditation of the power station may seek to have the output of the power station modelled and submit the outcomes of the modelling to the Regulator for use in determining a baseline. The modelling should be based on relevant factors including fuel use, plant capacity and the type of technology used in generating electricity.

For a power station that commenced generating electricity in the period 1 January 1994 to 31 December 1996, or where the power station has altered generation capacity in that period, the Regulator will require the registered person seeking accreditation of a power station to model the output of the power station for the year in which generation started or capacity increased. For the applicable circumstances, the modelling shall assume:

- the power station generated for the full year at the capacity which was available during the year when the power started generating; or

- the power station generated for the full year at the installed capacity after the increase in capacity.

This modelling shall be used in order to determine an annual generation level which can be included in calculations to determine the baseline of the power station.

Sub-item 2.4 of Schedule 3 states that where a power station sold electricity intermittently during the period 1994 to 1996, the Regulator may consider the level of generation in this period to be representative of a full year's production where, in accordance with Regulation 2.5, the intermittent nature of the production was caused by the cyclical availability of fuel. For example, for a sugar mill only generating electricity from bagasse for 5 months a year in each of 1994, 1995 and 1996, the Regulator may consider the generation in each of those years to be representative of a full year of generation from the power station, given that the fuel source for the power station was only available for those 5 months in each of the years 1994 to 1996.

Item 3 of Schedule 3

Sub-item 3.1 states that a 1997 eligible renewable power baseline may be determined for a period other than the three years immediately prior to 1997, where a different period may be more representative of the normal operational cycles of the power station.

Sub-item 3.2 states that the Regulator may determine a power station's baseline in a manner different from that outlined in Item 20 in cases where:

a) seasonal variations in supply of the renewable energy source are evident for more than three years and where, as a result, measurement of the generation of the power station over the years 1994 to 1996 may not be indicative of average levels of generation for the power station; or

b) major infrastructure changes to the power station or major changes to the operating environment of the power station, occurred during the three year period prior to 1997; or

c) a default baseline, as determined in Schedule 2, would cause hardship for a registered person; or

d) the amount of electricity generated from a power station prior to 1994 was significantly different to the amount of electricity generated over the period 1994 to 1996, and where the reasons for the change in generation were not related to the capacity of the power station, operating constraints on the power station, or demand for electricity from the power station; or

e) due to operating constraints such as an unplanned outage the electricity generation from a power station was greatly reduced at some stage during the three years prior to 1997; or

f) a decision by the Commonwealth government to take an action or put in place a policy directly reduces the power station's ability to generate electricity for a sustained period.

Sub-item 3.3 outlines the issues that should be considered by the Regulator when determining a special baseline for a power station. The Regulator is to consider a range of factors in order to determine a baseline for the power station which is representative of the output of the station, including:

- the generation capacity of the power station;
- the demand for electricity from the power station;
- matters affecting the output of the power station;
- generation from the station in the years prior to and immediately after the reference period; and
- the impact on the power stations' ability to create renewable energy certificates as a result of determining a baseline in accordance with Item 2 rather than this subitem.

Sub-item 3.4 stipulates factors that may enable a power station that commenced operation prior to 1997 to be considered a new power station under sub-item 3.5. The power station must have:

a) been permanently closed for at least 3 years from 1 January 1997; and

b) undertaken refurbishment in which the cost is at least half that required to replace another power station of the same installed capacity.

Item 4 - Interconnected hydro-electric systems

This Item outlines the factors to be considered in determining the renewable energy baseline for interconnected hydro-electric systems, as defined in Regulation 3.

Sub-item 4.1 (a) states that a baseline for an interconnected hydro-electric system may be determined for both the system as a whole and for each individual power station in the system.

Sub-item 4.1 (b) allows the Regulator to make adjustments to the baseline of a power station where, as a result of an action by the Commonwealth government, the power station's capacity to generate is directly reduced, or water is diverted away from power stations in the system.

Sub-item 4.2 states that if a new power station is constructed to generate electricity from the water after it has been diverted as a result of a decision of the Commonwealth Government, the new power station will have a renewable energy baseline of nil.

Sub-item 4.3 outlines those factors to be considered by the Regulator in determining whether a power station in an interconnected hydro-electric system should have its baseline adjusted, in accordance with sub-item 4.1 (b). Factors that must be considered are:

a) whether a Commonwealth action impacted on a change in the water flow;

b) the details of changes in the release of water flows;

c) whether the changes in water flow impact upon a particular power station;

d) the relationship between changes in water flows and changes in the level of electricity generation at a particular power station; and

e) the relationship between changes in water flows and changes in the level of electricity generation in the system.

Item 5 - Other hydro-electric stations

Sub-item 5.1 states that for hydro-electric power stations that are not part of an interconnected system, but where the action or policy of the Commonwealth Government directly reduces the power station's ability to generate or diverts water away from the power station, the 1997 renewable energy baseline for the power station may be adjusted. The factors which the Regulator should take into account when adjusting a power station's baseline are outlined in sub-item 5.2.

Item 6 - Baselines in 2001

Sub-item 6.1 states that for the year 2001, the baseline for a power station shall be three quarters of the baseline which has been determined in accordance with the principles in Schedule 3. However, for 2002 and all subsequent years, the baseline shall be the whole of the baseline determined in accordance with the principles in Schedule 3.

Schedule 4 Small hydro-electric systems

This schedule outlines the amount of electricity, in MWh per year, that is deemed to be generated by small hydro-electric systems of up to 6.4kW installed capacity, in accordance with Regulation 20.

Schedule 5 Solar panels (photovoltaic)

This schedule outlines the amount of electricity, in MWh per year, that is deemed to be generated by solar photovoltaic panels of up to 10.0kW installed capacity, in accordance with Regulation 20.

Schedule 6 Wind turbines

This schedule outlines the amount of electricity, in MWh per year, that is deemed to be generated by small wind generators of up to 10.0kW installed capacity, in accordance with Regulation 20.

Schedule 7 Certificates for solar water heaters

Part 1 of Schedule 7 outlines the postcode zones which apply for determining the number of renewable energy certificates which can be created in respect of an eligible installation of a solar water heater. For example, Barton in Canberra, which has a postcode of 2600, falls in Zone 3.

Part 2 of Schedule 7 specifies the actual number of certificates which can be created in respect of the eligible installation of specific solar water heaters. Solar water heaters are referred to by system type, tank size and number of collectors. Only solar water heaters included in this schedule are eligible for renewable energy certificates.