

DRAFT FOR CONSULTATION

Electricity (Renewable Preference) Regulations 2008

Governor-General

Order in Council

At Wellington this day of 2008

Present:
in Council

Pursuant to sections 62O and 169 of the Electricity Act 1992, His Excellency the Governor-General, acting on the advice and with the consent of the Executive Council and on the recommendation of the Minister of Energy, makes the following regulations.

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Regulations

- 1 Title**
These regulations are the Electricity (Renewable Preference) Regulations 2008.
- 2 Commencement**
These regulations come into force on [*a date to be specified*].
- 3 Interpretation**
- (1) In these regulations, unless the context otherwise requires,—
- Act** means the Electricity Act 1992
- applicant** means the applicant for an exemption under Part 6A of the Act or for a variation of an exemption under that Part
- application** means an application for an exemption under Part 6A of the Act or for a variation of an exemption under that Part
- specified period**, in relation to an application in respect of a specified generation plant, means the period of operation of

the plant commencing on the proposed first day of operation and ending on the expiry of Part 6A of the Act

year of operation, in relation to an application in respect of a specified generation plant, means a 12-month period of operation of the plant commencing on the proposed first day of operation or an anniversary of that date (being a 12-month period of operation that is in the specified period).

- (2) A reference in these regulations to **CO₂-e** is a reference to greenhouse gas emissions measured by taking into account—
 - (a) the amount of carbon dioxide; and
 - (b) the amount of other greenhouse gases in terms of a carbon dioxide equivalent (within the meaning of section 4(1) of the Climate Change Response Act 2002).
- (3) A reference in these regulations to publishing a matter means that the Commission must publish the matter—
 - (a) in the *Gazette*; and
 - (b) in any other manner (if any) that the Commission considers appropriate.
- (4) An example used in these regulations has the following status:
 - (a) the example is only illustrative of the provision to which it relates and does not limit the provision; and
 - (b) if the example and the provision to which it relates are inconsistent, the provision prevails.

Exemption for non-baseload plant

4 Prescribed limits

Option A starts

- (1) For the purposes of section 62G(1)(a) of the Act,—
 - (a) the prescribed average load factor limit is [*a value to be selected within the range 40% to 50% inclusive*] for each consecutive 3-year period of operation and any residual period; and
 - (b) the prescribed greenhouse gases emissions limit is an average of [*a value to be selected within the range 2.12 to 2.61 inclusive*] kilotonnes of CO₂-e per MW of electricity generated in each consecutive 3-year period of operation and any residual period; and

- (c) the prescribed start-up time limit is 15 minutes.

Option A ends

Option B starts

- (1) For the purposes of section 62G(1)(a) of the Act,—
- (a) in the case of a specified generation plant that is commissioned before 1 January 2011,—
- (i) the prescribed average load factor limit is 50% for each consecutive 3-year period of operation and any residual period; and
- (ii) the prescribed greenhouse gases emissions limit is an average of 2.61 kilotonnes of CO₂-e per MW of electricity generated in each consecutive 3-year period of operation and any residual period; and
- (iii) the prescribed start-up time limit is 15 minutes:
- (b) in any other case,—
- (i) the prescribed average load factor limit is 40% for each consecutive 3-year period of operation and any residual period; and
- (ii) the prescribed greenhouse gases emissions limit is an average of 2.12 kilotonnes of CO₂-e per MW of electricity generated in each consecutive 3-year period of operation and any residual period; and
- (iii) the prescribed start-up time limit is 15 minutes.

Option B ends

- (2) The following are the prescribed periods under section 62C(3) of the Act (which relates to the calculation of average load factor) that apply for the purposes of section 62G(1)(a) of the Act:
- (a) each 3-year period of operation:
- (b) any residual period.
- (3) For the purposes of this regulation,—
- 3-year period of operation** means a 3-year period of operation of the specified generation plant that is in the specified period, where the first 3-year period of operation commences on the proposed first day of operation of the plant and any sub-

sequent 3-year period of operation commences on the expiry of the preceding 3-year period of operation

residual period means a period of operation of the specified generation plant less than 3 years in duration between the expiry of the last complete 3-year period of operation and the expiry of Part 6A of the Act.

Exemption for co-generation process

5 Prescribed level of energy efficiency

- (1) For the purposes of section 62G(1)(c) of the Act, the prescribed energy efficiency level is 55% on average for each year of operation, as calculated in accordance with the following formula:

$$e + t$$

where—

e is the estimated electrical efficiency of the co-generation process, expressed as a percentage that—

- (a) is calculated by reference to electrical energy output divided by the fuel energy input; and
(b) must not be less than 25%

t is the estimated thermal efficiency of the co-generation process, expressed as a percentage that—

- (a) is calculated by reference to useful heat output divided by the fuel energy input; and
(b) must not be less than 10%.

- (2) For the purposes of subclause (1), the fuel energy input is assessed on the basis of gross calorific value.

Exemption for acceptable combination of renewable energy sources and fossil fuels

6 Exemption for acceptable combination of renewable energy sources and fossil fuels

- (1) For the purposes of section 62G(1)(d)(i) of the Act, the prescribed proportion is 60%.
- (2) For the purposes of section 62G(1)(d)(ii) of the Act, the prescribed energy efficiency level is 25% (calculated by reference

to electrical energy output divided by the fuel energy input, expressed as a percentage).

- (3) For the purposes of subclause (2), fuel energy input is assessed on the basis of gross calorific value.

*Exemption where generation plant will be
retired in whole or in part*

7 Prescribed manner for comparing emissions

- (1) For the purposes of section 62G(1)(e)(i) of the Act, to determine whether a specified generation plant together with any part of the existing thermal electricity generation plant that is not retired will be operated in a manner that will reduce greenhouse gas emissions by at least 20%, the difference in emissions must be calculated in accordance with the following formula:

$$\frac{x - y}{x} \times 100$$

where—

- x is the projected greenhouse gas emissions, during the specified period, from the existing thermal electricity generation plant (were the specified generation plant not commissioned), as reasonably estimated using a simulation model devised and maintained by the Commission
- y is the projected greenhouse gas emissions, during the specified period, from—
- (a) the specified generation plant; and
 - (b) any part of the existing thermal electricity generation plant that is not retired.

Example

Specified generation plant A will come into operation on 26 September 2009. The specified period is 26 September 2009 to the close of 26 September 2018 (the expiry of Part 6A of the Act).

Using the Commission's simulation model, it is estimated that x (projected greenhouse gas emissions, during the specified period, from the existing thermal electricity generation plant) will be 46 367 kilotonnes of CO₂-e.

In accordance with regulation 9, it is estimated that y (projected greenhouse gas emissions, during the specified period, from the

Example—*continued*

specified generation plant together with any part of the existing thermal electricity generation plant that is not retired) will be 34 775 kilotonnes of CO₂-e.

From these figures, it is calculated that emissions will be reduced by 25% $((46\,367 - 34\,775)/46\,367 \times 100)$.

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- (2) For the purposes of x in subclause (1), the simulation model must take into account—
- (a) the average load factor or factors at which the existing thermal electricity generation plant may be reasonably expected to operate; and
 - (b) the expected size, timing, and location of electricity demand growth; and
 - (c) the expected size, timing, and location of electricity generation assets that will be, or are likely to be, commissioned in the future; and
 - (d) the expected size, timing, and location of electricity generation assets that will be, or are likely to be, decommissioned or derated in the future; and
 - (e) any other factor that the Commission considers relevant.
- (3) For the purposes of this regulation, greenhouse gas emissions must be calculated in terms of CO₂-e.

8 Prescribed margins for security of supply

- (1) For the purposes of section 62G(1)(e)(ii) of the Act, the specified generation plant together with any part of the existing thermal electricity generation plant that is not retired must be operated in a manner that will not reduce security of supply below either or both of the following margins:
- (a) a mean winter energy margin for New Zealand of 17%;
 - (b) a mean winter energy margin for the South Island of 30%.
- (2) For the purposes of subclause (1), the mean winter energy margin for an area must be calculated in accordance with the following formula:

$$\frac{s - d}{d} \times 100$$

where—

- s is the estimated maximum supply of electricity from all sources of generation in respect of the area during the period 1 April to 30 September (inclusive) measured in MWh
- d is the estimated maximum demand for electricity in respect of the area during the period 1 April to 30 September (inclusive) measured in MWh.

Determination of greenhouse gas emissions

9 Determination of greenhouse gas emissions

For the purposes of regulation 4 and y in regulation 7(1), greenhouse gas emissions of an electricity generation plant for a period of operation must be calculated in accordance with the following formula:

$$h \times e \times t \times l \times 10^{-9}$$

where—

- h is the proposed heat rate of the plant in terms of gross calorific value (in MJ/MWh)
- e is the emissions factor for the relevant fuel in terms of gross calorific value after oxidation (in kilotonnes of CO₂-e/petajoule) that the Commission reasonably considers is a reliable measure of the emissions of the fuel, or blend of fuels, that are or will be used in the electricity generation plant
- t is the length of the period of operation (in hours)
- l is the proposed average load factor for the period of operation.

How applications for exemptions are made and dealt with

10 Application requirements

- (1) The Commission must—

- (a) prepare requirements for applications that it considers are reasonable; and
 - (b) publish those requirements.
- (2) The requirements must include a list of the information or documents that must be contained in, or must accompany, an application.

11 Applications

- (1) Applications must—
- (a) be made to the Commission in writing; and
 - (b) comply with the Commission’s requirements published under regulation 10; and
 - (c) contain sufficient information to allow reasonable consideration to be given to whether the relevant paragraph in section 62G(1) of the Act applies.
- (2) The Commission—
- (a) must acknowledge receipt of an application; and
 - (b) may, from time to time, request that the applicant provide, within a reasonable period of time specified by the Commission, any further information or documentation that the Commission reasonably considers is necessary to deal with the application.
- (3) The Commission may treat an application as withdrawn if the applicant does not supply information or documentation in accordance with a request under subclause (2)(b).
- (4) If the Commission considers that the application does not comply with subclause (1), the Commission, in its acknowledgement under subclause (2)(a),—
- (a) must notify the applicant that the application does not comply with subclause (1); and
 - (b) may give the applicant a reasonable opportunity to remedy the failure to comply with subclause (1) by resubmitting the application in a form that does comply.

12 Public conference

- (1) The Commission may decide to hold a public conference in relation to an application for the purpose of hearing oral submissions.

- (2) If the Commission decides to hold a public conference in relation to an application, the Commission must—
 - (a) appoint a date, time, and place for the conference; and
 - (b) notify the applicant of those details; and
 - (c) publish those details.
- (3) The Commission may conduct the public conference in any manner that it thinks fit.
- (4) The Commission must publish a summary of the submissions made in the public conference.

13 Commission must make recommendation within 60 working days

- (1) The Commission must make a recommendation to the Minister of Energy in relation to an application within 60 working days of receiving an application that complies with regulation 11(1).
- (2) The time frame for acting under subclause (1) may be extended by the Commission if the Commission reasonably considers that an extension is necessary in order to allow it to comply with section 62I of the Act.

14 Minister's decision on recommendation

If the Commission's recommendation is that an exemption should be granted on the application, the Minister of Energy must make reasonable efforts to make his or her decision on the application within 20 working days after receipt of the Commission's recommendation.

15 Commission may require payment of fees and costs

- (1) The Commission may require payment by an applicant of,—
 - (a) in the case of a variation of an exemption, an application fee of \$5,000 (inclusive of goods and services tax); or
 - (b) in any other case, an application fee of \$15,000 (inclusive of goods and services tax).
- (2) The Commission may require payment by an applicant of any costs incurred by the Commission in connection with the exercise or performance by the Commission of any power or func-

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tion relating to the application, including the costs incurred by the Commission—

- (a) in obtaining expert advice or expert assistance in connection with the application; and
- (b) in holding a public conference in relation to an application.

Clerk of the Executive Council.

Explanatory note

This note is not part of the regulations, but is intended to indicate their general effect.

These regulations, which come into force on [*a date to be specified*], prescribe certain matters for the purposes of Part 6A of the Electricity Act 1992 (which implements a 10-year restriction on new fossil-fuelled thermal electricity generation, except where an exemption is appropriate).

The regulations prescribe—

- (a) certain details relating to when the exemptions can be granted; and
- (b) matters relating to how applications for exemptions are made and dealt with.

Issued under the authority of the Acts and Regulations Publication Act 1989.

Date of notification in *Gazette*:

These regulations are administered by the Ministry of Economic Development.
