

Calculating Victorian Renewable Energy Certificates (VRECs) For Small Solar Panel (Photovoltaic) Systems

Version 1 - Released in June 2007¹

Introduction

The *Victorian Renewable Energy Act 2006* (the Act) and the *Victorian Renewable Energy Target Scheme Rules 2007* (the Rules) allow owners of small generation units (SGUs) to create and sell Victorian renewable energy certificates (VRECs). VRECs are purchased by relevant entities, such as electricity retailers, seeking to offset their liability under the Act so that they meet their renewable power percentage (RPP) targets. One VREC represents one Mega Watt hour (MWh) of renewable energy generation.

In order to be eligible to create VRECs, a SGU must be installed on or after 1 January 2007 in Victoria. Owners of SGUs can either create VRECs themselves, or assign their right to create VRECs to a registered agent in return for a financial benefit. A Register of Agents can be found on the ESC website (www.esc.vic.gov.au).

The VREC calculation method provided below applies to photovoltaic systems with a rated output of not more than 100 kilowatts (kW) or a total annual output less than 250 MWh. If a system has an output greater than 100 kW, or annual output of 250 MWh or more, the owner must apply to the Essential Services Commission (ESC) for the system to become an accredited power station.

Calculating VRECs

To establish how many certificates you may be eligible to create from your photovoltaic system, you should undertake the following steps:-

1. Establish your Zone by using Table 1, *Postcode Zones for Photovoltaic Systems* on page 4 of this document.

¹ The information provided in this document may be subject to change with amendments to the *Victorian Renewable Energy Act 2006* and the *Victorian Renewable Energy Target Scheme Rules 2007* (the Rules), and the administrative processes adopted by the Essential Services Commission.

2. Once you have established your Zone, you will be able to establish your Zone Rating for your photovoltaic system by referring to Table 2, *Zone Ratings for Solar Panel (Photovoltaic) Systems* on page 4 of this document.
3. To calculate the annual number of VRECs your system is eligible for, you multiply the Zone Rating by the rated power output (in kW) of your unit. You can find the rated power output of your unit in the specifications provide by the unit manufacturer. Please ensure that you use the exact figure that applies to your particular model.

$$\begin{array}{|c|} \hline \text{Zone} \\ \text{Rating} \\ \hline \end{array} \quad \times \quad \begin{array}{|c|} \hline \text{The rated power} \\ \text{output (in kW) of your} \\ \text{solar (PV) system} \\ \hline \end{array} \quad = \quad \begin{array}{|c|} \hline \text{Annual number of} \\ \text{eligible VRECs} \\ \hline \end{array}$$

4. If you calculate that you are entitled to more than 250 VRECs per year your system is classified as a potential photovoltaic power station and you must apply to the ESC to become an accredited power station. If you are a power station, you cannot assign your right to create VRECs to an agent.
5. You have the option of claiming VRECs in regular one-year, by five-year period or for a one-off 15 year period. For the 15 year period option to apply, you must claim your VRECs within 12 months of the system's installation date.

The procedure described in Step 3 can be used to calculate the annual VREC eligibility. VREC eligibility for one year, five years or fifteen years depending on the period over which you wish to create VRECs can be calculated by multiplying by 1, 5 or 15.

6. If your calculated number of eligible VRECs over a one-year, five-year or fifteen-year period is:-
 - o greater than 1 MWh, you must round down the calculated number to the nearest whole number of VRECs.
 - o between 0.5 MWh and 1 MWh, you are allowed to round up the calculated decimal number to 1 VREC.

Example 1

If you wish to create VRECs on a fifteen-year basis for a photovoltaic unit that has a rated output or kW capacity of 73.8 kW in the postcode area of 3505, you must:

- (i) Look up the postcode in Table 1 to establish your Postcode Zone : **3**
- (ii) Look up the Postcode Zone in Table 2 to establish your Zone Rating : **1.382**

- (iii) Multiply your Zone Rating by the kW capacity:-

$$1.382 \times 73.8 \text{ kW} = \mathbf{101.9916 \text{ MWh}}$$

- (iv) Multiply by 15 years:

$$101.9916 \text{ MWh} \times 15 \text{ years} = \mathbf{1,529.874 \text{ MWh}}$$

- (v) Round down the total amount of electricity taken to be generated to the last whole MWh to determine the number of VRECs you are eligible to create:

$$1,529.874 \text{ MWh} = \mathbf{1,529 \text{ VRECs}}$$

- (vi) This photovoltaic system is rated at less than 100 kW and has a total annual output of less than 250 MWh per year. It does not need to be accredited as a power station.

Example 2

If you wish to create VRECs on a five-year basis for a photovoltaic unit that has a rated output or kW capacity of 5.7 kW in the postcode area of 3505, you must:-

- (i) Look up the postcode in Table 1 to establish your Postcode Zone : **3**

- (ii) Look up the Postcode Zone in Table 2 to establish your Zone Rating : **1.382**

- (iii) Multiply your Zone Rating by the kW capacity:-

$$1.382 \times 5.7 \text{ kW} = \mathbf{7.8774 \text{ MWh}}$$

- (iv) Multiply by 5 years:

$$7.8774 \text{ MWh} \times 5 \text{ years} = \mathbf{39.387 \text{ MWh}}$$

- (v) Round down the total amount of electricity taken to be generated to the last whole MWh to determine the number of VRECs you are eligible to create:

$$39.387 \text{ MWh} = \mathbf{39 \text{ VRECs}}$$

- (vi) This photovoltaic system is rated at less than 100 kW and has a total annual output of less than 250 MWh per year. It does not need to be accredited as a power station.

Table 1 – Ratings and Postcode Zones for Solar (Photovoltaic) Systems

Item	Postcodes		Zone
	From	To	
1	3000	3390	4
2	3391	3398	3
3	3399	3413	4
4	3414	3426	3
5	3427	3474	4
6	3475	3514	3
7	3515	3516	4
8	3517	3520	3
9	3521	3524	4
10	3525	3538	3
11	3539	3539	4
12	3540	3549	3
13	3550	3560	4
14	3561	3569	3
15	3570	3570	4
16	3571	3606	3
17	3607	3617	4
18	3618	3622	3
19	3623	3628	4
20	3629	3657	3
21	3658	3684	4
22	3685	3687	3
23	3688	3724	4
24	3725	3731	3
25	3732	3999	4
26	8000	8999	4

Table 2 – Zone Ratings for Solar Panel (Photovoltaic) Systems

Item	Zone	Rating
1	3	1.382
2	4	1.185