

Home Generation: rewarding local renewable electricity generators

Summary

Good Energy has set up the 'Home Generation' scheme, which gives payments to small-scale renewable energy generators for all the electricity which they generate, thus encouraging more renewable generation at a local level.

Large-scale renewable energy generators in the UK set up commercial contracts to sell their electricity, and can also claim Renewable Obligation Certificates (ROCs), which currently sell for about £39 per MWh (3.9 p per kWh). However, for small renewable generators, the time and effort to do this may not be justified by the financial return. In addition, ROCs can be claimed only on an annual generation of 500 kWh or more, which excludes very small generators.

Good Energy has therefore set up the Home Generation scheme, which provides a payment of 4.5p per kWh to small renewable generators for all the electricity which they generate. To join the scheme, generators must buy the rest of their electricity from Good Energy, and must install a simple meter to measure the total kWh generated. Home Generation customers greatly appreciate the simplicity of this scheme, and typically earn about £100 per year through it. There are currently 200 generators in the Home Generation scheme, representing a total installed capacity of 440 kW.

Good Energy set up the scheme as part of their commitment to increasing the use of renewable electricity in the UK. They have used their extensive knowledge of the practicalities of local generation to lobby the electricity regulator and other suppliers, to make the rules for exporting electricity clearer and to negotiate a better deal for small generators.

The organisation

Good Energy trades exclusively in electricity generated from renewable sources. It is licensed as an electricity supplier in the UK, and buys electricity from renewable generators to sell to domestic and business customers. The company was established in 1999 and is owned by Monkton Group PLC.

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Technology and use

Good Energy is an electricity trading company, and does not install or operate renewable generation technology. Under the Home Generation scheme, Good Energy makes a payment per kWh to households and small businesses which generate up to 30 kW of electricity from renewable sources.

The household or business is responsible for making all the arrangements for the installation. Good Energy provides advice on issues like as metering and grid connection, and has good working relationships with equipment suppliers such as Solar Century and Proven Wind Turbines. The payment from Good Energy is for the total amount of electricity generated, regardless of whether it is used on site or exported to the grid. The renewable generator must therefore have a simple meter to record the total kWh produced. However, a more costly export meter, which would be needed to measure the export of electricity to the grid, is not required.

By June 2006, 215 small renewable generators had joined the scheme, with a total installed capacity of 440 kW. The majority had photovoltaic (PV) systems, 27 had small wind turbines and 2 had micro-hydro schemes. The average generation per system was 2.3 MWh per year in 2005, the last year for which full figures are available. Most of the systems were grid-connected, but stand-alone generators are also eligible to join the Home Generation scheme, and a few have done so.

How users pay

'Users' of this scheme are the small renewable generators. In order to join the scheme, they must become Good Energy customers for their electricity supply, and pay the standard tariff for the electricity they purchase.

The Home Generation scheme then pays 4.5p per kWh for all renewable electricity generated. This is paid quarterly, on the basis of an annual meter reading by Good Energy.

Training, support and quality control

Good Energy set up the Home Generation scheme because the current schemes for purchase of exported electricity and Renewable Obligation Certificates (ROCs) are complex, bureaucratic and often costly for small renewable generators. Home Generation is therefore designed to be as straightforward as possible for the user, with inexpensive metering requiring only annual readings, and a simple structure for payment.

Benefits and replicability

Home Generation encourages small renewable generators to produce as much electricity as possible. Although most current customers are committed to sustainable energy and would have installed their systems without an incentive, the scheme makes it easier to interest new people in local renewable generation. Home Generation customers include individuals, community groups, and Richmond Fire Station which has a 27 kW PV array. As part of their overall commitment to renewables, Good Energy also assists installation companies with applications for grants. The total generation from the current customers will average about 460 MWh this year, and avoids the emission of about 200 tonnes of CO₂.

There are indirect benefits to generating electricity at a local level. An independent study by the Sustainable Development Commission has shown that involvement with local generation reduces household energy consumption, because people become more aware of the amount of energy they are consuming and take measures to use it more sustainably.

Home Generation customers represent about 10% of all micro-generators in the UK. Good Energy has gained a broad understanding of the needs of small renewable generators through working with them, and uses this to lobby government, Ofgem and electricity suppliers on their behalf. This was especially relevant to the statutory consultation on microgeneration. Good Energy is also

putting pressure on EnergyWatch and Ofgem to require other electricity suppliers to make their export tariffs for micro-generators simple and transparent.

Management, finance and partnerships

Good Energy set up the Home Generation scheme to allow small renewable generators access to similar financial rewards as larger ones. Under the UK Renewables Obligation, electricity suppliers are obliged to supply a certain percentage (currently 4.9%) of their electricity from renewable sources. When a supplier generates electricity from renewables, it can obtain Renewable Obligation Certificates (ROCs) from Ofgem, the UK electricity regulator. As well as certifying the source of the electricity, these documents can be traded as they have a market value. In March 2006, ROCs were worth about 3.9p/kWh. At the end of each accounting period, every supplier needs to provide Ofgem with sufficient ROCs to cover their obligation, or else buy out of the obligation. A supplier with a surplus may sell ROCs to another with a deficit. The intention is to try to ensure that at least 4.9% of the overall electricity generation has come from renewables.

Currently, this scheme places a significant administrative burden on generators, which discourages small generators from claiming ROCs. It also requires a minimum generation of 500 kWh per year, which prevents very small generators from participating. Thus small renewable generators are at a disadvantage compared with larger ones. It is to compensate for this disadvantage that Good Energy set up the Home Generation scheme.

Good Energy deals only in renewable electricity, and therefore could claim ROCs on all its electricity sales, use 4.9% of them to comply with the Renewable Obligation, and sell the remaining 95.1% to other suppliers who need extra ROCs to make up their 4.9%. In order to increase the total amount of renewable energy generated in the UK, Good Energy have made a voluntary commitment to 'retire' about 6% more of its renewable energy sales than it is required to do. The electricity which they pay for under the Home Generation scheme forms part of this 'retirement'.

Good Energy administers the Home Generation scheme and carries out marketing, sales, commercial operation, finance, auditing and trading-in renewables. Customer services and billing are outsourced but the customer call centre is in-house. Chief Executive, Juliet Davenport, was responsible for setting up the Home Generation scheme and devising the business model. Financial Director, John Fairchild, researched the financial implications of this scheme and secured the financial resources. Commercial Assistants, Alex Vowels and Nick Haines have managed the scheme. A parallel scheme will be launched later in 2006, for customers who generate between 10 and 75 kW of electricity and are net exporters.

Dr Anne Wheldon, Technical Director of the Ashden Awards *Jeremy Rawlings, Technical Assistant* July 2006.

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