

9.0 Renewable Energy Considerations

Renewable technologies offer an alternative to traditional fuel sources while at the same time offering an energy source which minimises environmental impact and carbon generation.

9.1 The Highland Council's Renewable Energy Strategy

The Highlands have extensive renewable resources through hydro, wind, wave, tide and bio-fuel/energy. Developing ways to harness these are now being explored and developed. This is particularly important at a time when electricity generation from traditional sources is increasingly dependent upon imported materials and the UK Government remains undecided on the future of nuclear generation. The government's document [Planning for Renewable Energy](#) is intended to assist planners, regional and local decision-makers and other stakeholders in understanding the often complex issues associated with the different technologies and their application in different environments.

The drive for using energy from renewable sources comes from the recognition that global warming is related to greenhouse gas emissions such as carbon dioxide (CO₂), which arise largely from energy production. The growing awareness of the finite nature of oil and gas reserves is also significant, prompting the exploration of alternative energy sources.

The Highland Council aims to make itself a more sustainable and energy efficient organisation thereby reducing its energy costs, carbon emissions and impact on the environment. One way in which the council can help meet these aims is through increased use of renewable energy and low and zero carbon technologies within its buildings. [The Highland Renewable Energy Strategy & Planning Guidelines](#) further explains the council's Renewable Plan.

As a result, Renewable Technologies should be the first energy generation option considered when designing M&E systems for Highland Council properties. Should a [Fuel Options & Running Costs Appraisal](#) rule these out, only then should oil, gas etc. be considered.

Furthermore, any contractor installing renewable technologies for The Highland Council must be [MCS Accredited](#) and adhere fully to the [MCS – Microgeneration Installation Standard: MIS3005](#).

9.2 Green Council

One of the Green Council commitments is to encourage the installation of renewable energy technologies into the Highland Council's building stock. The Green Council have already backed the installation of photovoltaic and solar hot water panels on many of the Council's buildings and continue to encourage the use of renewable technologies in place of fossil fuels.

9.3 Feed-In Tariff

In order to help increase the generation of energy from renewable technologies the government has introduced the Feed-In Tariff; a scheme that pays people for creating their own "green electricity".

The Feed-In Tariff is designed for normal energy users, such as households and businesses, and has three main benefits:

- You get paid for the energy you produce and use in your property or sell back to the grid
- You save money by reducing the amount of energy you buy from your energy supplier
- You contribute to the aim of producing 8% of the UK's energy through the tariffs

The Highland Council is taking advantage of this tariff by installing PV's and wind turbines into it's buildings to help reduce energy demand and cost as well as generate income from the tariff.

The integration of wind turbines, photovoltaics and/or hydro power, where practical, into the M&E Designs for new and existing buildings will contribute greatly to reducing the council's energy demands, energy costs and carbon generation while allowing the council to take advantage of the revenue which is able to be generated by the Feed-In Tariff scheme.

9.4 Renewable Heat Incentive

The Renewable Heat Incentive (RHI) is similar to the Feed-In Tariff in that it is a scheme which pays people for generating energy from a renewable technology; in the case of the Renewable Heat Incentive the energy medium is heat.

Initially only the following technologies will be supported by the RHI –

- Biomass Boilers
- Biogas Combustion
- Deep Geothermal
- Ground Source Heat Pumps (Water)
- Water Source Heat Pump (Water)
- Energy for biomass proportion of Municipal Solid Waste
- Solar Thermal (up to 200kWth)

The Renewable Heat Incentive makes renewable heat not just an environmentally sound decision for The Highland Council but also a financially attractive one. By designing renewable systems which are supported by the RHI into council properties the council can reduce carbon generation, fuel costs and generate an income; renewable technologies should be the first heat source option considered when designing mechanical systems for Highland Council properties.

All future installations of renewable technologies which are eligible for RHI will be applied for, by The Highland Council's Energy & Sustainability Team during the later stages of the construction period in order that the application is processed and given preliminary accreditation prior to the commissioning date, allowing the council to begin receiving RHI payments for a site immediately upon it being commissioned.

In order for the Energy & Sustainability Team to process the applications for new biomass sites the following information must be submitted to The Highland Council within 1 week of the project being awarded to a contractor –

- Make and model of heating plant being installed
- Installation capacity of heating plant
- Name plate efficiency of heating plant
- Estimated date of commissioning
- Number of heat meters/flow meters being installed
- Model & manufacturer of each heat meter/flow meter
- Heat meter serial number(s)
- Flow meter serial number(s)
- Number of non-RHI eligible plants connected to the system
- Non-RHI plant size and fuel type (if any)
- Number of heating plant this installation is replacing (if any)
- Size and fuel type of replaced plant (if any)
- The capital cost of purchasing/constructing the physical equipment (exc. VAT) i.e. cost of containerised plant
- The indirect costs of the installation i.e. installation costs, planning costs, consultants costs
- Serial number of the installation
- Schematic drawing of the installation
- Manufacturer's calibration certificates for all heat meters/flow meters and associated components

Furthermore, the manufacturer's calibration certificates for each and every heat meter and flow meter installed within a project must be submitted to The Highland Council one month prior to the completion of the project.