



Big Lottery Fund Energy Efficient Venues Programme

Guide to Getting Started

This factsheet on getting started has been produced by Community Places to assist community and voluntary groups who are planning to undertake work to improve the energy efficiency of their building. It provides guidance on which energy efficiency measures will result in the greatest energy efficiency savings. This is not a comprehensive guide to all the energy efficiency measures that are available but is designed to provide a starting point for groups.

Step 1 - Insulation

The most important step in making your building more energy efficient is to ensure that it is well insulated. More heat escapes through the walls of an uninsulated building than from anywhere else. Therefore, if the walls of your building are not insulated at present, this is one of the first things you should consider. Options include:

- cavity wall insulation (if cavities exist);
- internal dry-lining or external wall insulation (if the walls are solid).

After the walls of a building, most heat is normally lost through the roof. You should therefore have the depth of any existing loft insulation checked and, if necessary, have it topped up to the current recommended depth of 300 mm.

Fitting floor insulation can also have benefits but may not always be practical.

Step 2 - Replacement Windows and Doors

A significant amount of heat is also lost through windows and doors. Once you have ensured that your building is well insulated you should consider replacing single glazed windows and doors with new double glazed windows or secondary glazing.

Step 3 - Draught Proofing

Draught proofing can help significantly to reduce heat loss from your building. Once you have considered whether your building is properly insulated and whether the windows and doors should be replaced, you should consider draught proofing. Some options include:

- draught proofing and sealing of existing windows and doors to minimise air leakage;
- building a new porch or draught lobby;
- installing self-closing or automated doors.

Step 4 - Heating System

Heating is normally the highest energy cost for any community building. Therefore, if your building is well insulated and draught proofed to reduce heat loss, the next step in making your building more energy efficient is to look at your heating system. Using a fully controlled efficient heating system is fundamental to reducing your fuel costs. Ways of achieving this include:

- Choosing the most efficient heating system available, for example, if the boiler is more than 15 years old, you might want to replace it with a more energy efficient model. If the existing boiler is less than 15 years old and in good condition, it would benefit from an annual service to maximise its efficiency;
- Controlling heating systems with zoning, timers, thermostats and thermostatic radiator valves. Intelligent control systems that monitor and inform about actual energy usage are also available. Simple changes such as changing the setting of your thermostat or using a timer can help to improve the energy efficiency of your building.

You should also look at the way in which heat is distributed around your building. Replacing inefficient radiators and making sure that heating and hot water pipes and hot water storage tanks are properly insulated can help distribute the heat in a more energy efficient way. If the existing distribution system is well insulated and in good condition, it may benefit from a service such as draining and flushing, which helps to maximise its efficiency.

Step 5 - Water Heating

If you use a lot of hot water it is more economical to provide it from a central heating system with a well insulated hot water storage tank. However, if this is not feasible and you have a separate system such as a point of use electric water heater, you can reduce running costs by locating it as close as possible to the sink to minimise pipe runs, and by placing a plug in the sink rather than washing under running water.

Step 6 - Energy Efficient Appliances and Lighting

Upgrading your appliances to more energy efficient models can help reduce the amount of energy you use, for example, you might replace your fridge freezer with a more energy efficient model.

Lighting can represent a significant cost to community buildings therefore replacing old light fittings and bulbs with low energy lighting can help to reduce electricity costs. Low energy lighting can be used in combination with motion sensors to ensure that rooms are only lit when in use and such sensors are particularly useful in bathrooms and stores.

Step 7 - Renewable Energy

Before you consider installing renewable energy equipment, you should make sure that all other practical measures have been taken to reduce heat loss, to reduce electricity demand, and to improve the overall energy efficiency of your building. Renewable technologies can be expensive and you should consider which solution will have the most benefit for your building and its users. Some examples of renewable energy technologies are listed below.

- **Biomass Heating** - The most popular type of biomass heating system is a wood pellet boiler. Biomass heating can be used to heat radiators and hot water and is particularly suitable for buildings which are off the gas network and therefore dependent on oil. A pellet boiler can directly replace an existing oil boiler and the annual costs of running a pellet boiler are significantly lower than the costs of running an oil boiler. Wood pellets are readily available across Northern Ireland but you should consider if there is enough space at your premises to provide a dry storage facility to accommodate a bulk pellet delivery, and also ensure that you purchase good quality pellets.
- **Photovoltaic Panels** - These panels convert daylight into electricity and are most suitable if your building has a south facing roof. However, while due south provides the optimum output, a roof which faces southeast to southwest may still be feasible. The roof should be free from shading and there should be a demand for electricity in the building during daylight hours.
- **Solar Water Heating** - This is most suitable if there is a high demand for hot water in your building e.g. for showers, and if your building has a south (or southeast to southwest) facing roof. Solar water heating can also be integrated with a biomass boiler system to meet the various seasonal demands for hot water and heating. For example, during the summer months the solar system may meet all of your hot water requirements and during the winter months it preheats the water therefore contributing to both central heating and hot water.
- **Wind Turbine** - Wind turbines are suitable if your building uses a large amount of electricity and if the site has a sufficient wind resource. The average annual wind speed is the critical factor in determining the feasibility of a wind turbine so you would need to check that it is six metres per second or higher.

Step 8 - Sustainable Design

While you are carrying out work to your building, there may be opportunities to incorporate sustainable design principles. Possible measures include:

- optimising the use of space with a compact design;
- using the orientation of any new extensions or windows to maximise natural heating and lighting through capturing sunlight;
- providing for flexible use of internal spaces to avoid waste during future alterations;
- provision for recycling with space to sort and store different materials and composting space outside.

Associated Costs

There are three types of associated costs which you can include in your grant application if they are needed:

- (a) the cost of redecoration, new fittings, floor coverings etc. which may arise because you are getting energy efficiency works done.
- (b) planning and building control fees. The factsheet on Planning Permission and Building Control for Community Buildings explains which types of work require planning permission and building control approval. If you need any of these approvals you will need to pay the fees involved. The factsheet gives details of estimated costs.
- (c) project management: you may need professional help to:
 - apply for planning permission or building control approval; or
 - tender for and appoint builders and oversee the whole project. The fee for a professional project manager (e.g. architect, engineer, quantity surveyor) may be between 5% and 10% of the cost of all the works.

Energy Audit

An Energy Audit is carried out by a qualified professional and assesses the energy efficiency of your building. An Energy Audit makes recommendations about what work you should carry out to improve the energy efficiency of your building. It will give an indication of how much it will cost to complete this work, and whether planning permission and building control are required. For more information about Energy Audits please see the Energy Audit Pack.

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Big Lottery Fund has appointed Community Places and partners to provide technical information, support and advice to potential applicants on energy efficiency measures, planning permission and building control processes, tendering and contracting for small scale capital projects, accessibility issues and sustainable development. Guidance notes and application forms for the Energy Efficient Venues Programme are available on www.biglotteryfund.org.uk