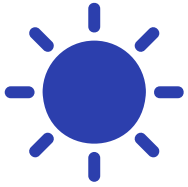


BUILDINGS ENERGY GUIDE & RESOURCES

Climate Action Programme 2024
Arts Council Training

2024



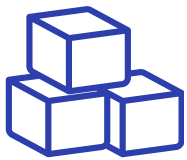


ADDRESSING ENERGY USAGE

When we look at the ways in which we contribute to climate change, energy usage is the most significant. This is because most of our energy is still generated by the burning of fossil fuels which creates greenhouse gas emissions. For the purposes of this guide, we are looking uniquely at energy usage in buildings. Energy usage in travel and transport, including audience travel, will be dealt with in separate guides.

In addition to the guidance listed here, you can also access further information by consulting the slides from our webinar on Energy, or watch the recording of that event [here](#).





KEY BUILDING BLOCKS

MEASURING

A key building block to reducing energy usage, and the resulting emissions, is to **measure your current usage and create a baseline**. Further information on Impact Measurement and a toolkit to record your energy usage can be found [here](#). If you create a baseline, reducing energy usage will be more meaningful.

Once you've created the initial measuring approach (i.e. using a spreadsheet), ongoing monitoring of your energy should be straightforward; simply input the details of usage from your bills as they arrive. There are options listed below to help if you do not have access to data from energy bills. If your building does not have a Smart Meter, ensure that electricity and gas bills are accurate by taking and submitting monthly meter readings to your supplier.

COLLABORATION

Another key building block in energy reduction is **bringing together those you work with to approach energy saving collaboratively**. Your colleagues will be inspired to reduce energy waste if they're involved from the start.

KEY PRINCIPLES

Incorporate the following key principles in your approach to **reducing the environmental impacts of your energy usage**:

- **Be more energy efficient:** Avoid wasting energy, use energy efficient equipment (LED lights, A rated white goods) and Implement energy saving approaches such as installing movement sensors for lighting.
- Where possible, **move to electricity** for your energy sources (for heating and transport).
- **Source your electricity from renewable sources** (eg. green tariffs, solar photovoltaic or PV panels).

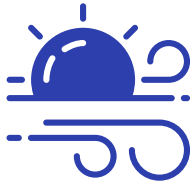


BE MORE ENERGY EFFICIENT

OFFICE-BASED ORGANISATIONS

Easy wins – no cost

- Turn off computer monitors when leaving your desk for more than ten minutes.
- Turn off desktop and laptop computers when leaving your desk for more than two hours.
- Use laptops rather than desktops where possible, as the energy usage is less.
- Turn lights on only when needed – use natural daylight when it's sufficient for your work.
- Turn lights off when leaving a room.
- Consider turning off printers, except when in use.
- Turn off all office equipment (computers, printers, photocopiers) when leaving at the end of the day.
- Don't leave items with digital displays (i.e. time) such as microwaves turned on. Turn them off at the socket.
- Fill a kettle with only the amount of water you need.
- Consider making tea or coffee and keeping it in a flask for regular use.
- Consider using power strips (strips with multiple sockets) to turn off all office equipment at the end of the day and avoid using phantom or vampire power.
- Calculate an approximate energy usage for your office using [Creative Carbon Scotland's Tenant's Energy Toolbox](#).
- Where you have control over heating, set heating at 19° in offices, and at 15°-18° in corridors.
- Set heating to turn on only when needed. Set heating to turn off 30 minutes before you leave the office.
- Position desks neither too close to nor too near radiators. Ensure that radiators and windows are not blocked by office furniture.
- Label switches so that only the light fittings you need are turned on (turning lights off and on does not use more energy).



BE MORE ENERGY EFFICIENT

OFFICE-BASED ORGANISATIONS

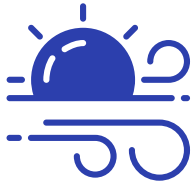
Medium costs

- Consider purchasing an Electricity Monitoring Socket to measure energy usage for individual pieces of equipment.
- Ensure any new equipment is 'A' rated for energy efficiency.
- Ensure your lighting is zoned efficiently allowing you to use only the lights you really need.
- Where you have permission, replace CFL lights with LED fittings.

Influencing your landlord and other building users

- Arrange a meeting with other building users, tenants, and your landlord. Identify ways you can work collaboratively to reduce energy usage and avoid waste.
- Ask your landlord if they can provide you with data on your energy usage.
- Suggest installing sensor lighting in corridors, storerooms, stairwells etc.
- Is heat being lost through poorly fitting or single glazed windows and doors? Can these be replaced or upgraded?
- Can radiators be fitted with TRVs (Thermostatic Radiator Valves)?





BE MORE ENERGY EFFICIENT

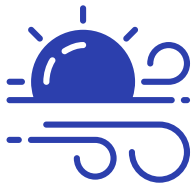
LARGE BUILDINGS (THEATRES, ARTS CENTRES, GALLERIES, MUSEUMS, STUDIOS)

If you are based in a large building which is open to the public or to members, your building energy usage will almost certainly represent the bulk of the emissions for your organisation. Most, but not all, large buildings will have access to their energy bills for electricity and heating. Those with this data will be well positioned to create a baseline and set a clear target for energy reduction. Those without will still be able to apply the guidance listed below but may not have access to the data that will confirm energy reductions.

In offices, the guidance noted above for smaller organisations will also apply to large organisations. In addition, large organisations could do the following...

Small interventions

- Put bar fridges on timers rather than leaving them on constantly.
- Replace CFL and incandescent lighting with LED as fittings need to be replaced.
- Ensure any new equipment purchased is energy efficient, or 'A' rated.
- Install sensor lighting in corridors, stairwells, storerooms etc.
- Install Thermostatic Radiator Valves or TRVs on radiators (where needed).
- Where your annual spend on energy exceeds €10,000, apply for an Energy Audit voucher from the Sustainable Energy Authority of Ireland (SEAI) and identify an accredited energy engineer to carry this out.
- Draught-proof doors and windows.
- Identify grants which you may be eligible for (Local Enterprise Office Green for Business supports, SEAI grants for Solar Photovoltaic Panels (hereafter referred to as Solar PV), Department of Arts Stream E funding, etc).
- Move to a green tariff with your electricity provider.



BE MORE ENERGY EFFICIENT

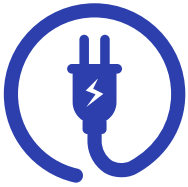
LARGE BUILDINGS (THEATRES, ARTS CENTRES, GALLERIES, MUSEUMS, STUDIOS)

Significant interventions

- Replace all CFL and incandescent building lighting with LED .
- Create a plan for replacement of Tungsten stage or gallery lighting with LED. Cost this, including any electrical upgrades that will be required.
- Consider re-zoning your heating system.
- Carry out recommendations from your energy audit that don't require a large financial outlay.
- Consider installing a draught lobby if significant building heat is leaving through entrance doors.
- Consider installing energy monitoring equipment for a granular understanding of your energy usage.
- Investigate the feasibility of installing solar photovoltaic (PV) panels.
- Insulate your building where possible.
- Apply for funding to install solar PV, install an EV charging point.
- Identify potential funding sources for larger upgrades and refurbishments as noted in your Energy Audit.

Large interventions

- Draw up and cost a capital works plan to implement recommendations from your Energy Audit. This plan should include measures to improve building fabric which require significant financial outlay (building retrofit including insulation, draught-proofing, triple glazing, airtightness measures, an improved Building Management System (BMS)).
- Where appropriate, install an alternative heating system such as an air or ground source heat pump, or connect to a district heating system which uses heat recovery as an energy source. You will need to have completed an energy audit or have the advice of an energy engineer before deciding to install heat pump technology.
- Replace Tungsten stage lighting with LED lamps.
- Install solar PV panels on your roof.
- Insulate hard to reach areas, such as the roof of your building.



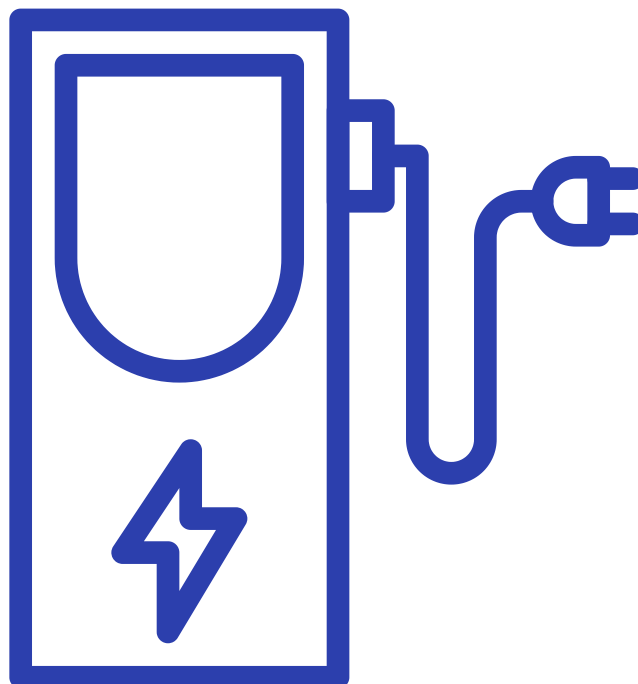
MOVE TO ELECTRIC

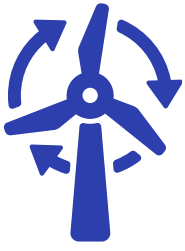
Move to electricity for all of your energy sources (for heating and transport where possible)

As noted in the guidance above, moving from a fossil fuel heating source (such as oil or gas) to a heat pump will reduce your emissions in the longer term. Heat pumps are regarded as a form of renewable energy technology because of the way they extract heat from the air or the ground to heat your building. They are powered by electricity but use this in a very efficient way.

In order for heat pumps to work effectively, buildings need to be well insulated and airtight. Retrofitting buildings to allow for this can require significant capital investment.

Where your organisation uses a company vehicle, such as a van, converting this to an electric vehicle (or EV) will significantly reduce your transport emissions. However, this has significant capital costs.





SOURCE YOUR ELECTRICITY FROM RENEWABLE SOURCES

Source your electricity from renewable sources (eg. green tariffs, Solar PV panels).

GREEN TARIFFS

Electricity in Ireland is derived from a number of sources (including gas, renewable energy and coal). It is delivered nationwide through Ireland's electricity grid and ESB Networks. Green tariffs are offered by most electricity suppliers but this does not mean that 100% renewable electricity is magically delivered to your building; rather, that the amount of electricity you use is matched by certified renewable electricity purchased by your supplier.

In some instances, electricity suppliers are investing in renewable energy such as wind and solar farms. In other instances, they are purchasing that electricity both in Ireland and from Europe. In many cases, they do both. In choosing a supplier, try to pick one which is investing in the renewable energy transition.

SOLAR PV PANELS

As noted above, investing in solar PV panels can provide you with your own electricity from a renewable source – the sun. Where suitable roof space exists, investment in Solar PV has a relatively short payback period (4-6 years approximately) and can also yield dividends in terms of payment for surplus energy fed back to the grid. It works best where your electricity demand matches the electricity generated by the panels (in other words, where you use a lot of electricity during the day). Solar PV panels can be supplemented with batteries for electricity storage.



USEFUL LINKS

- [Green Arts Initiative Ireland](#)
- [Julie's Bicycle Energy Resources](#)
- [Energy Saving Trust](#)
- [SEAI Energy Academy](#)
- [SEAI Energy Audit Application](#)
- [SEAI Guide to Energy](#)
- [Creative Carbon Scotland](#)
- [Creative Carbon Scotland's Tenant Energy Toolbox](#)
- [Local Enterprise Office](#)
- [Department of Tourism, Culture, Arts, Gaeltacht, Sport and Media](#)
- [Energy Webinar](#)
- ['Make a copy' Energy Spreadsheet](#)

Contact

D Light Studios
46 North Great Clarence Street
Dublin 1

www.nativeevents.ie
info@nativeevents.ie
catriona@greenarts.ie

