A few pointers on reducing your house's carbon emissions.

Although it is possible to achieve near zero emissions with a brand new Eco home, ordinary houses can still be made much more carbon efficient without breaking the bank. This list is not exhaustive, but here are some ideas.

Adopt a Whole House approach
Try and set out options for the whole house and prioritise what you want to do. Even if you have to work piecemeal, it is better to have an overall plan of those things you would eventually like to do, as different measures can impact one another and you need to plan sympathetically so as not to create problems.
For extensive refurbishments it really pays to get expert advice as early as possible.

Spend money wisely
The guiding principle should be to get the maximum impact from your budget. For instance, spending £5000 on Solar PV could cut your house's emissions by 35%, whereas adding extra surface insulation to a wall with insulated cavities may cost twice as much but only save 5%. Many measures are useful, but the most effective ones should come first. Here again, this is where some expert guidance can steer you in the right direction.
Similarly, look at measures with subsidies, such as FIT for solar panels or RHI for heat pumps, and take into account the future income when assessing viability.
Planning is essential to allocate your resources most effectively.

Low cost/ No cost measures.
Behaviour change costs nothing. Often people focus on expensive refurbishment without realizing that a lot can be achieved by simple lifestyle changes and low cost measures.

Lower the thermostat – In summer internal house temperatures are generally around 18 degrees and we find this comfortable. Why then do we set heating thermostats at 21 degrees in winter? Every degree lower saves around 10% on heating bills. Setting the thermostat at 18 degrees saves around 30% versus the "recommended" 21 degrees! If you're chilly wear a jumper or a fleece or just get in the habit of always wearing them in winter.
Only heat the rooms you live in – your radiators should have thermostatic valves that can be used to lower or shut off heating in unused rooms or bedrooms.
Draughtproofing – Investing in DIY draughtproofing of windows and doors and sealing chimneys that are not used has a big effect on heating. Open fireplaces in particular lose a huge amount of heat and using some kind of plug when not in use saves energy and improves comfort.
Radiator reflectors
Radiators not only heat the air in the room - they try to heat the wall behind them. If that is an outside wall it can mean an awful lot of heat is wasted in warming up cold brickwork. Reflector panels placed behind radiators help the rooms to heat up more quickly and cut this waste heat. Purpose made ones are availabe, but even aluminium foil wrapped around corrugated cardboard will have much the same effect for almost no cost. The saving in heating can be 5/10%.
Secondary double glazing – Cheap secondary double glazing can be very effective, unobtrusive and low cost, especially in conservation areas where options are restricted. DIY Secondary double glazing of six windows could cost £600 and cut heating bills and emissions by 5/10%. See the Practical Advice tab of our website for more detailed information.
Loft and Cavity insulation – Insulating these areas gives great savings at little cost and may be done for free for vulnerable households. Combined together these can save 20-30% off you heating bill and are probably the most cost effective measures you can do if they haven't already been done.
There are many ill-informed scare stories about cavity insulation suggesting that it causes damp. However, regulations are tight and installers always survey first to advise. They are experts and will not do the work if there is any doubt. About 70% of eligible cavities have already been successfully filled and new materials are even more effective.

Tumble dryers – If you use a tumble dryer it adds about 4% to your carbon emissions. Drying outside is best or even drying inside on clothes horses. Some families, especially those with young children may feel a dryer is essential. If so, go for a condensing one with heat pump technology that uses half the electricity. It costs a little more, but the savings of £35/40 per year make it very economic and halves emissions.
LED lighting – LEDs have improved enormously in the last couple of years. These can now replace both conventional bulbs and downlighters and save around 80% vs Halogen or old-fashioned bulbs. Places like Homebase sell LED lamps for around £4/5, which save their cost in a year or two and last for 10 years. Best to go for "warm" colour of 2700 - 3000K to most closely match conventional lighting.

Grants
If your household is receiving any kind of Benefit, including Pension Credit, you could be eligible for free energy saving measures under the ECO scheme, particularly loft insulation, cavity wall insulation and boiler replacement. If you think you might be eligible contact the Energy Saving Advice Service on 0300 1231234 or look at the government website www.gov.uk/energy-company-obligation.

Solar PV
Solar PV is one of the best ways of cutting your house's carbon emissions. Because of the high level of sunshine on the south coast, PV panels have particularly high output. 4kWp of panels could cost £5000 and produce 4400kWh of carbon free electricity. That carbon saving is 35/40% for a typical house and even if there was no subsidy we should all be thinking of doing this. It is worth looking at Nick Rouse's assessment of the current payback of PV under the reduced Feed in Tariff (FIT), which is much better than many had thought. www.transitiontownlewes.org/are-solar-panels-worthwhile-page.html

Solar Thermal hot water
This measure makes sense for family homes with high hot water demand, but is not very cost effective for smaller households. Also, bear in mind that it requires a cylinder so if you want to fit this in the future don't swap your boiler for a combi.

Heating system efficiency
Even if you use gas or oil, you can still reduce emissions by investing in a more efficient condensing boiler, if you do not already have one. Replacement costs around £2000/2500 but can save 10/20% and may be done for free for vulnerable households, such as the elderly or those receiving benefits. Similar savings can be made by ensuring that your house has essential controls such as Room thermostat, Thermostatic radiator valves (TRVs), Programmer and ensuring your hot water cylinder has a thermostat and good insulation (if you have a cylinder).

Renewable heating
The government's Renewable Heat Incentive (RHI) gives generous subsidies for low carbon heating and those for Air Source heat pumps are set to increase by around 30% in the spring of 2017
Heat pumps – Climate change experts suggest that heat pumps are the low carbon system for the future and will eventually replace gas. Heat pumps are expensive but under RHI there are subsidies over seven years that can pay for much or all of the cost. If you have an up to date EPC the value of RHI can be projected from the heat demand figures.
Woodburning stove – Burning logs or scrap wood can displace gas and reduce emissions. However, wood stoves are only effective if used regularly so that they genuinely reduce gas heating. Some homes can be heated almost entirely this way. However, if the stove is only going to be used a few times every winter to make the living area very warm whilst the gas heating continues, it will have little impact. Installing a stove is expensive at around £3000 and you need to be realistic about whether it is going to pay its way.

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