How to cut your electricity and gas use

without changing your lifestyle

What voltage is UK mains?

- It was meant to be 240 volts until 1995.
- Now it is meant to be 230 volts.
  or, more accurately, 230 volts +/- 10%
  That is, between 207v and 253v.
- Actual supply voltage is mainly above 240v.

What voltage are things designed to run at?

- 220v (+/- a safety margin)
- You pay for units of electricity (kilowatt hours)
- watts = volts * amps
- Reducing the supplied voltage from maybe 245v to 220v leaves electrical devices working just as well but reduces kWh used.
- Some electronic devices will have a longer life at 220v than at a higher voltage.

How much can you save?

- Devices that just turn electricity into heat (such as an electric kettle) won't give any saving. In fact a kettle will take slightly longer to boil.
- Electric motors and compressors (like central heating pumps, fridge and freezer compressors and motors in washing machines) can give savings of more than 15% with no drop in performance.
- Things like computers and compact fluorescent lights will give less savings – maybe 3-5%.
- Overall a little over 10% is likely for most households.

Who has fitted voltage reduction equipment?

- 10 Downing Street, London
- DECC headquarters, London
- OFGEM headquarters, London
- Environment Agency, Cambria House, Cardiff
- HM Prison Cardiff
- Cardiff + Vale College for 3 sites.
- 26 Waitrose stores
- 75 Asda stores
- 1,500 Tesco stores

Domestic scale voltage reduction equipment

- 'Industrial scale' voltage reduction is very well established.
- Voltage reduction on a domestic scale is newer and less well known.
- Up to 2012 only one company was making household units.
- Now several other companies offer alternatives.

First on the scene…

- Vphase VX1 about £250
- www.vphase.co.uk
- Dedicated 30 amp circuits for heating (for electric immersion heaters or electric cookers) are not routed through the VX1.
- All other circuits are.
- The VX1 is automatically bypassed for a while if there is a high continuous load (above 1 kW)for a prolonged period.
- This unit is OK for the majority of houses.

New in 2012, 60Amp units

- The following have all of the house supply routed through them (even though there is no saving on heating circuits).
- These would suit heavier users such as a small hotel.

- Voltis home about £350

www.Savepowerathome.co.uk

- VO4 home about £600

www.vo4home.com

- Apex Domestic VO about £300

www.apexvo.co.uk

Fitting a unit

- All of these units must be fitted by a qualified electrician.
- The units are fitted close to the consumer unit and are about the same size as the consumer unit.
- Fitting may take 1 to 2 hours depending on how difficult access is.

Payback

- Savings depend on what voltage the supply was to start with and how much electricity was being used.
- For most households there should be at least a 10% reduction in electricity use.

The Green Deal (GD)

- What is it?
- How will it work?
- Is it right for you?

Green Deal – What is it?

- A new way of financing energy efficiency measures for buildings.
- No up-front cost.
- The cost is repaid (along with fixed interest) over a long period through the electricity bill.
- The payments should always be less than the saving in gas and/or electricity cost resulting from the energy efficiency measures.
- If the home is sold then the repayments stay with the house and are taken on by the new owner.

Tenants and Landlords

- Tenants will need their Landlords permission to take up the Green Deal.
- Landlords will need tenants permission.
- From April 2016 Landlords will by law not be allowed to unreasonably refuse permission.
- From 2018 rented accommodation must have a minimum energy performance rating (which will probably be set at E to start with).

How it Works

- A registered Green Deal Assessor carries out a Green Deal Assessment.
- This identifies measures that could be taken.
- Householder then decides which, if any of the measures to go ahead with.
- Householders can pay for measures themselves
- - or arrange Green Deal finance.
- Measures are carried out by a GD registered firm.
- Payments are collected via electricity bill.

When does it start?

- It was launched on October 1st.

  (did you notice?)
- Assessments can take place now.
- As soon as you have had an assessment you can get quotes from GD contractors for carrying out recommended measures.
- Green Deal finance won't be available until January 28th 2013.

Cash-back

- Those who take up the Green Deal early can apply for up 50% cash back.
- Cash-back is first-come first-served until £40M has gone. After that the cash-back rate will reduce.
- Contact the Energy Savings Advice Service now on 0300 123 1234 to register interest in getting further information when it is released.

What kinds of measures are eligible for GD finance?

- Only measures that become part of the building, such as solid wall insulation or a replacement central heating boiler are eligible.
- Things that can be easily moved, such as a more energy-efficient fridge or compact fluorescent lights, are not eligible.

How do I know what is eligible?

- GD assessments will list possible measures that would be eligible.
- DECC has issued a list of eligible measures that will be reviewed and updated from time to time.
- Voltage reduction equipment will not be eligible for GD finance at least at first.
- DECC have said this decision is being considered and may change.

How much does an assessment cost?

- There is no fixed price.
- Large companies may subsidise assessments in order to get sales leads for carrying out recommended measures.
- This may make it impossible for small independent assessors to make a return from carrying out assessments.

What interest rate will apply to GD repayments?

- The interest rate will be whatever is agreed between a GD finance provider and someone signing an agreement with them.
- The interest rate will be fixed.
- 7 or 8% is being talked about at the moment.

Is that a fair interest rate?

- The administrative cost of collecting repayments should be very low.
- As repayments are collected through the electricity bill the risk for finance providers of not recovering their money is very low.
- These factors suggest that the interest rate should be much lower.
- Government could have made interest rates much lower.

Is GD finance right for you?

- Not if you can get the work done for free.
- Maybe not if you expect to stay in the property for at least all of the pay-back period and
  - you have enough money to spare in savings accounts that give a rate of return lower than GD interest.
  - - or you can borrow at a lower rate of interest than GD.

Investing in Renewable Energy

- Abundance Generation was set up in 2010.
- www.abundancegeneration.com
- Individuals can pick renewable energy projects to invest in.
- Investment is from £5 upwards in a debenture.
- Capital is repaid in equal instalments over 20 or 25 years, along with a share of income from the project.
- Projects are in the UK and are of moderate scale.

DECC consultation

- Seeks views on Community Engagement in onshore wind Developments.
- Wouldn't it be good if all wind farm developments had to offer an opportunity for part ownership by individual investors?
- This could be done through shares in community energy co-operatives or via debentures.
- Preferential rates of return could be given to investors who live near to the development.
- Consultation closes on November 15th.
- www.decc.gov.uk/en/content/cms/meeting_energy/microgen/strategy/strategy.aspx