Questions, and some answers from the ACE Green Cafe event 15/3/2025

Part 1 Bills & Tariffs

Why the daily standing charges?

Energy companies seem to prefer to separate out the cost of the production of the energy and the cost of the infrastructure and distribution, since both costs can vary at times by differing amounts. By using a price comparison website and entering our actual (or estimated) annual energy usage, all the calculations are done for us and this makes it easy to compare suppliers.

We have heard of plans by some energy suppliers to offer tariffs that lump together the energy price and daily standing charges but then you have some kind of price unit that is neither ‘per kWh’ or ‘per day’. Only if all the energy companies agreed to do the same, would we be able to compare them again. Would this result in lower prices?

What about oil (or LPG or bio-mass) comparisons, as we’re not on mains gas?

We wondered whether to try to include these fuels in the presentations. With the limited time we had available we decided to concentrate on electricity and mains gas. Fuels such as oil are purchased in advance rather than being bought at the time of use, like mains gas. This gives the customer the opportunity to plan for the fuel replenishment at the most cost effective time, and to shop-around with local suppliers to get the best prices.

What about smart meters not working?

Your energy supplier is responsible for getting your smart meter working, and it’s in everyone’s interests for them to work. Perseverance seems to be the only solution. Ultimately the fix locally appears to be to replace the ‘radio-type’ communications hub with a ‘cellular mobile/4G’ type hub, commonly used in the southern counties of the UK.

Under current regulations suppliers in Northern England have to fit the radio-type to begin with. If it does not work ask your supplier to take steps to get it working. This usually means they first ask the DCC (Data Communications Company) if they can improve the radio signal. If unsuccessful then push your supplier to install a cellular comms hub on your meter. All the work is free of charge.

ACE/SELC have been in dialogue with Sir Julian Smith and the Energy Minister at DESNZ about the issue and are liaising with Malhamdale Environment Group and Clapham Sustainability Group to involve NY Council in putting pressure on DESNZ. The Government says it is committed to resolving the problems.

Do smart meters have direct readout?

Smart meters have a digital read-out on the meter itself, but this is usually only a counter, just like older meters. On new or old meters by comparing the readings over a given time the usage/consumption can be calculated. On our bills this period might be monthly or three-monthly.

Smart meter customers usually have a moveable in-home display too, connected wirelessly to the meter from which it gets data in real time. This can be helpful if the smart meter is in a less accessible location. The in-home display calculates and shows you your real-time energy consumption, and knowing your energy tariff, it can also show you the cost. Within a few seconds you can see the effect of switching appliances on or off.

Some suppliers allow you to view half-hourly consumption readings via your on-line account, and it may be possible to download these readings to a spreadsheet.

With the price of electricity being four times the price of gas, what's the incentive to replace a gas boiler with a heat pump?

It removes the dependance on fossil fuel. If correctly sized and specified, heat pumps should be four times as efficient, so should not cost more to run over the whole year.

Also, see Part 5 about SELC expanding local energy generation and use – the more successful SELC is the more consumers can benefit from lower price local electricity.

Part 2 Insulation of Old Buildings

Avoiding mould - is this possible?

Yes, by reducing humidity, increasing ventilation. Also, insulating the cold surfaces on which moisture condenses, remains damp and supports mould growth.

Trickle vents and 'always on' trickle heat recovering extract fans seem to work well with very low power usage. Positive ventilation systems are more elaborate but very effective.

Part 3 Grants

Advice for tenants?

Tenants in receipt of benefits and in rented accommodation can request grants for home energy improvements, but the landlord/homeowner must agree to work being done. If the owner is not supportive, the tenants, who usually have to pay the energy bills, might still be eligible for a social energy tariff to help reduce the cost of heating the home.

Rented accommodation must meet Minimum Energy Efficiency Standards (MEES) with an Energy Performance Certificate (EPC) rating of E, or better. This is still pretty low for a comfortable home. It's difficult to understand why a landlord with tenants in receipt of benefits, would not support home energy improvements since they could be done at no cost to themselves.

I already have solar panels, can I get a grant for battery storage?

For homeowners with solar PV panels that are now considering adding battery storage, they can benefit from the zero rated VAT on new equipment and installation. One could see it as a 20% discount. But batteries purchased alone, without also additional panels, are not eligible.

If the homeowner is in receipt of benefits, they could check their eligibility for a grant through their energy supplier or local authority, North Yorkshire Council. Their **need** for the batteries would be assessed to determine whether they would qualify for a grant.

How do we find a trustworthy installer/tradesperson?

Installers of solar panels, batteries, heat pumps etc must be MCS certified in order to apply for the government grant. MCS is a standards organisation - (Micro-generation Certification Scheme).

This website has more information and might help you find a suitable installer.
https://mcscertified.com/find-an-installer/

Is it worth putting solar PV panels on east/west facing properties?

Generally yes, but avoid anything more north-facing. An installer will be able to advise on this. Power output would be expected to be 80% of a similar south-facing roof so may still be beneficial. A combination of both east and west facing can be particularly successful.

What are the pros and cons of cavity wall insulation?

Pros
Improved thermal performance of the wall (cavity walls without insulation performed less well than solid masonry walls)

Can be installed with minimal disturbance, with no the loss of internal space that can be a consideration with internal wall insulation (IWI).

Minimal impact on the external appearance of the building, although it will require holes to be drilled in the external face which can have a visual impact if not made good carefully.

A payback period of roughly 32 months.

Cons
The cavity is there to catch any moisture that might have penetrated through the outer skin, allowing it to run down the cavity and out of weep holes at the bottom. Filling the cavity with insulation is therefore going to impact on this. In reality in most cases this is not an issue, however it is a serious consideration for a property in an exposed location that may be having to deal with more persistent and intense driving rain. If moisture penetrates through on a regular basis the insulation can become soaked and slump within the cavity as well as potentially allowing moisture to track across to the internal skin.

It is also critical to have the condition of the cavity inspected using a probe camera before installation to check there are not lumps of mortar on the cavity ties and/or a build up of mortar at the bottom of the cavity and that the ties themselves are in good order. This is because any of these issues may all result in the cavity not being evenly filled resulting in thermal bridging and cold spots internally with the associated risk of condensation and mould growth.

Link to an advice note from Historic England below:
https://historicengland.org.uk/images-books/publications/eehb-early-cavity-walls/heag083-early-cavity-walls/

Part 4 Local Energy Generation

Are there loans available for solar PV?

Loans for energy saving measures might be available through the government Green Deal scheme. There is more information at this website

https://www.gov.uk/green-deal-energy-saving-measures/how-to-pay

What is the payback time for Solar PV, Batteries etc?

It will depend on the cost of installation and how much it reduces your bills (from not needing to buy so much electricity) and how much you get paid for surplus electricity you export. An installer should be able to give you an idea of payback time. It could be as little as 4yrs or as much as 10yrs or more.

Members of the Settle Energy Local Club will see a favourable price for electricity they export. This will improve payback time and hopefully be one of the factors that encourages lots more rooftop solar in Settle, Giggleswick and Langcliffe.

My panels are 20 years old, should I be considering an upgrade?

There is no doubt more modern panels are a lot more efficient, producing much more electricity for the same amount of space. After 20yrs you will have certainly recouped your original expenditure so you could approach the decision for a new system as an entirely new project.

How are old solar panels recycled /disposed of?

95% of solar panels can be recycled and in the UK solar panel installers are required to take back panels or pay for a government-approved Distributor Take-back Scheme (DTS) to collect and recycle it properly. This part of the Waste Electrical and Electronic Equipment (WEEE) regulations. If your supplier no longer exists contact https://www.pvcycle.org.uk/

There is an excellent article about recycling at https://www.sunsave.energy/solar-panels-advice/maintenance/recycling

Could a water tank be used as a battery equivalent?

You can get electrical diverters installed that send surplus generation (from solar panels) to an immersion heater in a domestic hot water cylinder. This is a good way of storing surplus energy.

The questioner may have been thinking of some kind of hydro gravity storage system with the Settle Hydro - not sure though. Such systems are used with mountain reservoirs in Wales/Scotland. Probably a few batteries at the Hydro would be easier.

Part 5 Settle Energy Local Club

SELC is a community project that will enable you to take control of your electricity bills while supporting local renewable energy, by helping you to match your electricity use with power generated from local sources such as solar panels.

How does it work?
When you sign up for this project, you become part of your local Energy Club. The Club is made up of members of your community, plus local generators. As a member, you'll have a free smart meter fitted in your home that will record when you're using electricity - as well as how much - helping you to buy power in a better way.

If members of the Club use power when local solar is generating, they will use power at the cheapest rates. The energy the local generator produces will be shared evenly between all the members using electricity at that time and each home will pay the price agreed by the Club (the 'match tariff') for their share.

Any extra power required by households will be provided by an electricity supplier. The price for this extra electricity depends on the time when electricity is used (known as a 'time of use tariff', TOUT). The day is split into four. You pay more for extra electricity at busy times (4pm - 8pm) and less when it's quieter.

Your smart meter will collect info about your energy use, which you'll be able to view online. As well as this, you'll receive customised energy reports, advice and support to help you shift your electricity use to take advantage of the best prices.
You can make the most of being part of the Energy Local Club if you are able to shift your electricity use:

a) to when the local renewable power is producing (which you'll be able to check on the energy dashboard on a computer, smartphone or tablet)
b) away from early evenings

Each household will be different, but we estimate you'll be able to save between 10% - 30% on your electricity bill. Most people will benefit from Club membership without changing how you use energy, but the biggest gains are when you can use the local power.
There is a £4 annual membership fee for the Club.

How will the community benefit?
Through Energy Local Settle local generators with solar panels will get a better price for their power. When you pay for local electricity, this money goes entirely to the local generator. Savings on your bills will leave you that bit extra to spend.

Be part of Energy Local Settle
We're looking for local households and businesses to be part of the Club. We expect to launch in the next few weeks. If you would like to participate please register your interest at https://energylocal.org.uk/settle This is without commitment but secures your place in the queue to join. Consumer members will be taken on in groups to keep a balance with the numbers joining who can generate electricity into the Club. When you register you indicate whether you have solar panels or can let the Club know if you are considering adding panels.
Email any enquiries to settle@energylocal.org.uk