Switching energy suppliers -

a) Green tariffs

Do you want to help the fight against climate change by buying renewable electricity?

Over half of current electricity tariffs claim renewable credentials and many come up as the cheapest option on electricity switching websites, so it should be easy and help you save money at the same time, right?

As it turns out, the electricity supply market is complicated and there is a lot of greenwash associated with so-called renewable electricity tariffs.

This factsheet briefly explains how we generate and supply electricity in the UK, what a green tariff is, how to avoid the greenwash trap and current tariffs available in the Barningham area.

❖ *Factsheet summary*

- All electricity purchased through the grid is generated using a mix of sources, regardless of the supplier or tariff.
- The UK government has a target to reduce carbon emissions from electricity generation to net zero by 2050. Achieving this target will require a massive increase in generation from renewable sources.
- As individuals, we can best support decarbonisation of the supply network by purchasing our electricity from companies that are building new renewable generation capacity.
- Unfortunately, the majority of "green" electricity tariffs and suppliers are doing nothing to build new capacity, even those claiming to sell 100% renewable energy. *Ofgem agrees that many suppliers are misleading their customers and will be acting to change this shortly.*
- If you want to support the development of new renewable generation capacity, look for "**Gold Standard – Green Tariff**" suppliers on Uswitch.com. Good Energy is a good option at present with a competitive monthly tariff. An alternative is Ripple Energy, which allows you to invest directly in a renewable development.
- It's important to note that the electricity supply market continues to evolve rapidly and new tariffs are being introduced all the time. Opportunities for further savings via flexible pricing and use of Smart Meters are expected to increase, offering particular benefits to those considering electric vehicles or electric heating.

❖ So how does the UK electricity supply system work?

- UK electricity is generated from a mix of fossil fuels (gas, coal and oil), nuclear, waste and renewables (on and off-shore wind, hydro, solar PV and bioenergy) as shown in Figure 1.
- All suppliers feed into the shared electricity grid.
- So regardless of your electricity supplier or tariff, the electricity you buy is generated from the same mix of sources as everyone else.
- Ethical Consumer[1] describes how the current system works:

  "If you are on a green tariff and you turn your kettle on, some renewable electricity will be taken (on paper) from the electricity account of someone on a standard tariff and transferred to yours. Then a gas-fired power station will be turned up in order to replace it."

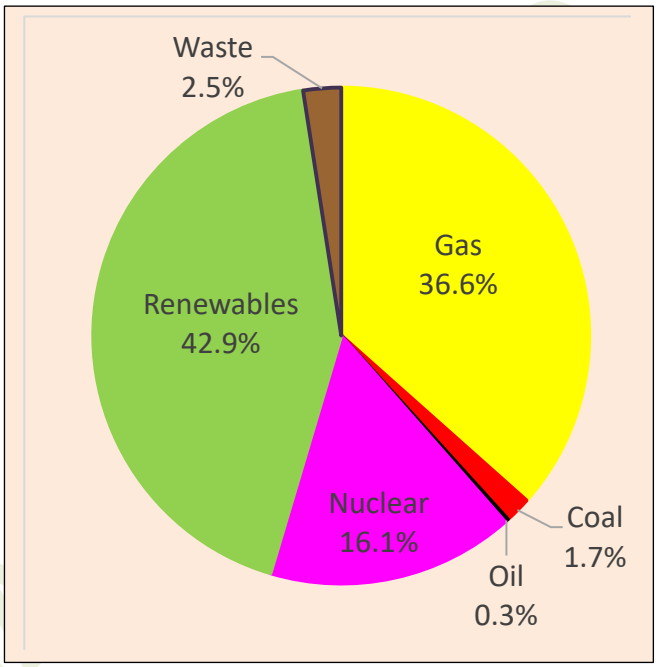

Figure 1 – UK Electricity Generation Sources (2020)

❖ Decarbonising supply to meet the UK 2050 net zero target

- The UK government has set a goal enshrined in legislation to reach net zero carbon emissions by 2050 to avert the climate change crisis. This includes decarbonising the electricity supply network.
- Since 2011, UK carbon dioxide equivalents (CO_2e[2]) emissions from electricity have reduced by almost half as we've reduced our dependence on coal and increased the use of renewable generation sources, as shown in Figure 2.

[1] Ethical Consumer is an independent, not-for-profit, co-operative that publishes a monthly magazine.

[2] Carbon dioxide equivalents, a measure of all greenhouse gas emissions produced

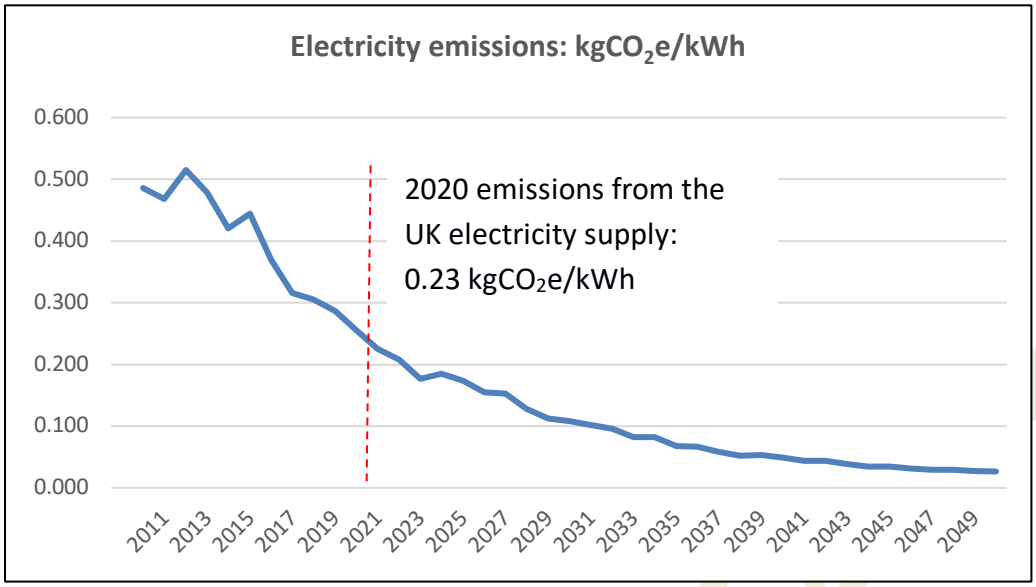

Figure 2 – CO_2e emissions from UK electricity supply, 2011-2050 [3]

- Further actions are necessary to reduce emissions to net zero by 2050.
- In 2020, the UK had its first coal-free Christmas, as well as going almost 68 days in the spring without any use of coal generation. All coal-fired plants are due to be phased out by 2024.
- Renewables supply an increasing proportion of our energy mix. On Easter Monday, 5th April 2021, thanks to sunny, blustery weather and low demand, the UK supply from renewables was the highest to date: consisting of 39% wind and 21% solar (61%). However, less than 1GW of new capacity was added in 2020 and much more is needed.
- To achieve our 2050 net zero target, the UK needs to be building 3GW of new renewable generation capacity every year.

As individuals, we can support decarbonisation of the supply network by purchasing our electricity from companies doing just that.

❖ *Understanding "green" electricity tariffs*

- Over 50% of electricity supply tariffs now claim to be "green" or from "100% renewable" supplies. Unfortunately, in most cases, this amounts to greenwash.

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[3] Source: https://www.gov.uk/government/publications/industrial-emissions-directive-derogation-cost-benefit-analysis-tool

- Most "green" electricity suppliers are doing nothing to contribute to the development of new renewable generation capacity.
- Here's how they do it:
  - For every 1000 kWh of renewable electricity generated, the energy regulator OFGEM gives the generator one 'green' certificate: a Renewable Energy Guarantee of Origin certificate (REGO) which certifies the energy as being green.
  - REGO certificates can be sold separately from electricity, the aim being to provide an additional small subsidy to renewable developers. But the price is based on supply and demand. As current renewables generation massively outstrips the purchase demand, the price of certificates is very low: 30-50p.
  - Under existing loopholes in legislation, any supplier can promote their electricity as "100% renewable", just by purchasing an amount of REGO certificates equivalent to its customers' use.
    - So, if you buy from one of these suppliers and you use 6000 kWh a year (the average Barningham use), they would purchase six REGO certificates (at 50p each) to cover your use at a total cost of about £3. ***How does that compare to your annual electricity cost?***
    - The company doesn't have to produce or even purchase any renewable electricity.
    - It can source its electricity supply from any generator which are likely to be using cheaper fossil fuels.
- Most suppliers of "100% renewable" electricity only purchase REGOs. Despite what their customers think, they are not supplying renewable electricity nor are they contributing towards the development of new generation capacity.
- With the problem of greenwashing highlighted by several organisations and newspapers (e.g., Which, Energy Savings Trust, The Guardian), Ofgem has acknowledged that some suppliers are misleading their customers and are working to address the problem.
- **Fortunately, there is information available to help you make an informed decision on choosing an electricity supplier.** It is possible to choose suppliers that are making meaningful contributions to building the new renewable electricity generation capacity in the UK.

❖ *How to switch to a meaningful "green" electricity tariff*

➢ Helpfully, Uswitch.com now assign an Accreditation rating to "green" energy tariffs based on review by an independent panel.

	Uswitch Accreditation for Green Tariffs		
	Bronze	**Silver**	**Gold**
Criteria:	Suppliers must: • buy renewable generation obligation (REGO) certificates equivalent to the energy purchased.	Suppliers must: • meet Bronze requirements *and* • purchase at least 42.9% of electricity from renewable generators under Power Purchase Agreements (PPAs). *PPAs provide a steady income that allows generators to make further investments in renewables.*	Suppliers must: • buy 100% of electricity from renewable generators under PPAs *and* • at least 10% of green gas, with all emissions from gas being offset *and* • provide a meaningful contribution towards increasing and/or promoting renewable energy. *Suppliers in this category are considered market leading in their environmental credentials.*
Suppliers / Tariffs:	Bulb EDF E.ON Next Goto Energy Green Igloo Energy Neon Reef Octopus (Co-op, M&S) Outfox the Market Ovo Energy People's Energy Pure Plant Scottish Power Shell Energy SO Energy Symbio Together Utility Point Utility Warehouse	Octopus Energy – Super Green 24M Fixed tariff Scottish Power – Help Beat Cancer Green Fixed August 2023	Good Energy – all tariffs British Gas – Green Future Jul 2023 tariff *Uswitch are currently evaluating additional candidates for the Gold Standard.*

- Further information provided by Ethical Consumer indicates supplier contributions towards building renewable capacity.

Brands	Renewables in supply mix	Contribution to capacity building in UK (at January 2021)
Good Energy Green Energy	100%	All energy purchased through Power Purchase Agreements (PPAs).
Ecotricity	100%	20% generated through owned renewables. Remainder purchased via PPAs.
Octopus / Co-op	100%	Building directly owned capacity with 69% of renewable electricity generated by group. Remainder by REGO certificate purchase.
Ripple Energy	100%	Electricity backed by PPAs from projects directly invested in by consumers; rest supplied by Co-op Energy.
OVO Energy	100%	20% purchased through PPAs; 40% target by end 2021. Remainder by REGO certificate purchase.
Bulb	100%	Some purchased through PPAs but proportion unknown.
Shell Energy*, SSE, Together Energy	100%	None
People's Energy	97%	None
British Gas	76%	Electricity for the "Green Future" tariff is purchased through PPAs.
E.ON	46%	Energy generated through biomass.
EDF	20.5%	None
Npower	~17%	None
Scottish Power	36%	Renewable electricity purchased using PPAs.
PFP, Utilita, Utilities Warehouse	8%	None

XX – Meaningfully contributing to renewable capacity building for all energy supplied
XX – No or limited meaningful contribution
XX – Some fossil fuels or nuclear in energy fuel mix
XX – >5% from coal and/or % renewables is below UK grid average

** a subsidiary of Shell, whose main business is based on fossil fuels.*

❖ What are the "big six" doing about renewable electricity?

- The "big six" are historically the largest energy suppliers in the UK and have dominated the market since it was privatised in 1989.
- Collectively, they supply 79% of homes in the UK but their prices are often higher than new entrants and their customer ratings are worse.
- While they remain the main players, the sector is changing rapidly with various mergers and break-ups. All are investing in renewables on a large scale.

❖ Deciding which tariff to purchase

- To best support the development of new renewable electricity generation in the UK, you should consider using:
  - a USwitch "**Gold Standard – Green Tariff**" supplier or tariff
  - one of the Ethical Consumer Best Buy suppliers: Good Energy, Green Energy UK, Ecotricity or a company that supports generators through Power Purchase Agreements
  - Ripple, an innovative energy supplier which allows consumer to invest in a new renewable project as part of an energy co-op. Once the project is operational, the investor's bills are reduced in proportion to their investment and can result in a significant savings over the lifespan of the generation plant.
- Other considerations:
  - Some suppliers operate as social enterprises that offer other benefits to their target beneficiaries: e.g., PFP Energy (owned by a non-profit housing association), Together Energy (recruiting staff from disadvantaged areas in Scotland)
  - Some suppliers offer "smart" tariffs to those with large, flexible electricity needs from electric vehicles, heat pumps or battery storage. These offer two electricity rates with a lower rate available when demand is low.

❖ And the cost?

- The cheapest currently available electricity tariffs for the Barningham area are shown in Figure 3. These are based on an average annual usage of 6000 kWh/year and payment by monthly direct debit.

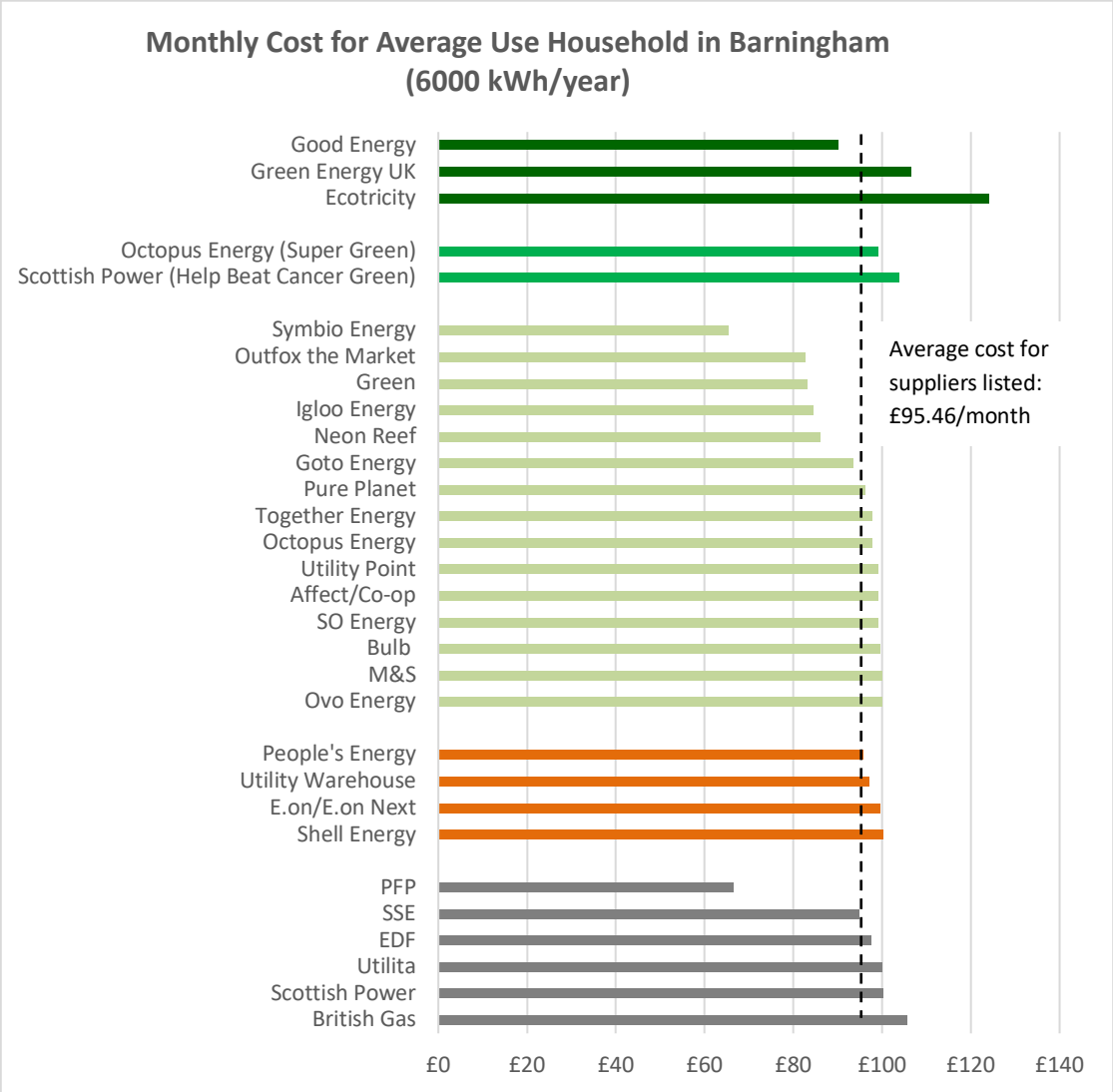

Figure 3 – Cheapest electricity tariffs based on Uswitch search (June 2021)

XX – Suppliers directly supporting development of renewable electricity capacity and are therefore exempted from the price caps imposed by Ofgem
XX – Tariff based on supplier purchase of >42.9% of electricity via PPAs
XX – Suppliers who only purchase REGOs
XX – "Green" tariffs offered by suppliers whose main sources are fossil fuels and nuclear
XX – Standard tariffs based on mix of energy sources, including fossil fuels and nuclear

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This information guide has been prepared by Barningham Net Zero. The information presented is drawn from the Department for Business, Energy & Industrial Strategy "Energy Trends" statistical release 25 March 2021; Uswitch.com (June 2021), Ethical Consumer magazine (February 2021), supplemented by company website data and news reports. It is intended as general guidance only. Further expert advice should be sought if required. Reproduction is not permitted without the prior permission of Barningham Net Zero CIC. Please contact info@barninghamnetzero.com for any queries.

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