



# CARBON BITES

From the CIBSE ENERGY PERFORMANCE GROUP

## Green Tariffs, Power Purchase Agreements (PPAs), Offsetting and Insetting

### What are the Challenges Surrounding So Called 'Green' Tariffs?

Green electricity tariffs are currently defined through the possession of a Renewable Energy Guarantees of Origin (REGO) certificate by the supplier. Renewable energy provided without a REGO cannot be sold under green tariffs, despite being 'green' by nature. On the contrary, REGOs can be freely traded, meaning that suppliers of non-renewable electricity (brown power) can buy a REGO and sell their energy under a green tariff. Therefore, consumers looking for impact through their choice of a green tariff do not always achieve it.

REGOs are recognised across Europe and traded in the European market. Around 50% of UK electricity consumption is covered by a REGO because of UK product and net imports.

The cost of power and subsidies, for example, Renewable Obligation Certificates (ROCs), is the largest driver for investment in renewable electricity generation. The monetary value of REGOs is low and does not currently drive investment. Therefore, the consumer's choice of a green tariff lacks the impact they were expecting.

Climate Assembly UK concluded in September 2020 that assembly members felt strongly about the need for better information to promote informed choice and changes in individual behaviour. Regulations need to evolve beyond REGOs if they are to deliver impact and drive investment in renewable energy.

### What is the Role of Power Purchase Agreements (PPAs) and the Criteria to Consider?

PPAs are long-term contracts for customers to purchase electricity directly from renewable energy generators. The PPA provides the investment security for new-build generation plants by providing a secure, long-term customer demand for the energy. The criteria to consider when entering into a PPA vary with technology, size and output, risk profile and financing. The challenges are: (1) The cost of energy versus traditional supply contract; (2) The duration of the contract; (3) Regulation and policy changes, for example, government incentive changes; (4) The supplier's involvement; and (5) The proportion of demand you choose to invest.

### I Have Heard About Carbon Offsetting, But What is Carbon Insetting?

Carbon offsetting aims to deliver quantified emission reductions to compensate for any residual emissions left after measuring and reducing emissions as much as possible. Carbon offsetting is often provided by third parties and is verified using standard methodologies, for example, Gold Standard, and Verra. Carbon insetting is where a business reduces emissions within their own supply chain to compensate for residual emissions from other activities.

Lucy Pemble, ICF, October 2020

### Key Issues

- Renewable Energy Guarantees of Origins (REGOs) do not provide the impact consumers are seeking.

- The acquisition of REGOs does not determine the feasibility of investment in renewable energy as much as power price and subsidies.
- Power Purchase Agreements (PPAs) required careful planning to incorporate risk in terms of regulatory, technology and cost of energy changes, as well as future development plans.
- PPAs provide renewable energy, for example, wind power, which is generated intermittently, yet consumers have a different profile of demand. This must be matched.
- It can be hard to get buy-in at senior level for PPAs.
- Carbon offsetting and insetting projects reduce emissions but can be seen as a substitute for direct emissions reduction.
- Offsetting and insetting can provide a distraction from carbon intensive activity, which requires overhaul to reduce emissions directly.

#### Links

- Climate Assembly UK's report, entitled "The Path to Net Zero", is available from: <https://www.climateassembly.uk/report/>
- A Backstop Power Purchase Agreement (BPPA) contract is available from: <https://www.ofgem.gov.uk/publications-and-updates/backstop-power-purchase-agreement-bppa-contract>
- The Verra Verified Carbon Standard is available from: <https://verra.org/project/vcs-program/>
- The Gold Standard website is available from: <https://www.goldstandard.org/>
- The CIBSE Energy Performance Group webinar, entitled "Green Tariffs, PPAs, Offsetting and Insetting", is available from: <https://www.cibse.org/networks/groups/energy-performance-group/power-hours>

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