



## Energy and Environment

November 2011

In November 2009 we published a briefing summarising the development of a new model for selling electricity – the “direct power purchase agreement”. Here we update our November 2009 paper and provide additional detail on alternative direct PPA structures being used in the market. These structures continue to offer greater choice for generators and large electricity consumers and are challenging licensed electricity suppliers to innovate the pricing of their traditional PPA offerings

### Electricity supply and private wire export

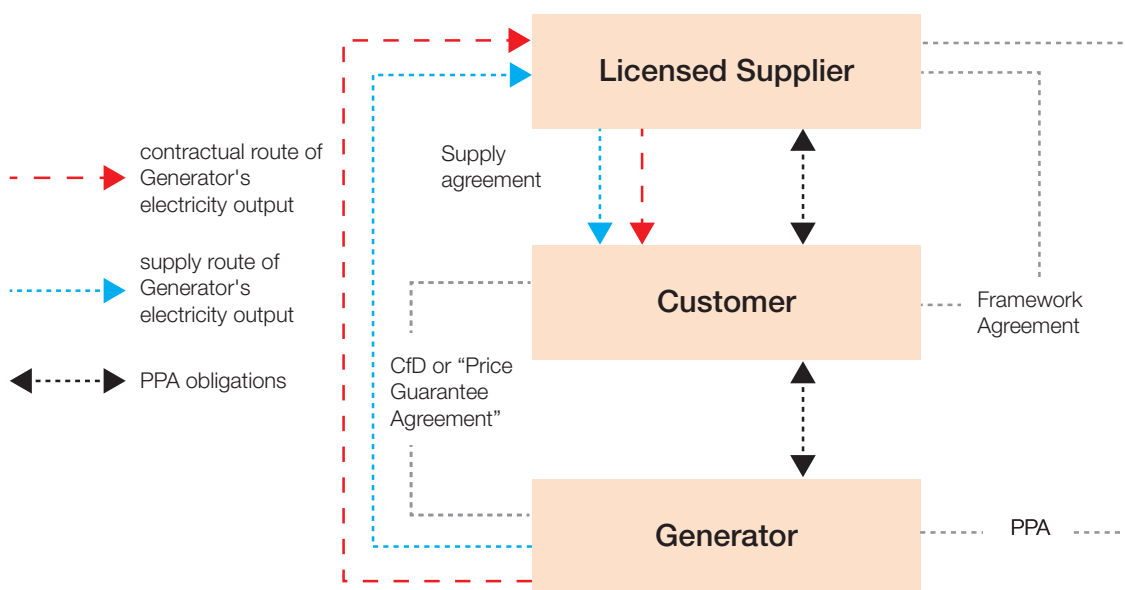
Traditionally, electricity generated by renewable power projects has been sold directly to licensed suppliers who then trade the power on the wholesale market or supply direct to their customers. Corporate customers wishing to purchase green electricity have been able to sign up to green tariffs. Such tariffs generally will not offer a “guarantee of origin” and provide no direct link with the generator or greater security of supply than traditional brown power tariffs and may be less competitively priced.

Although electricity supply, transmission and distribution activities are heavily regulated, for a number of years private wire arrangements and on-site generation has allowed smaller generators to supply local customers directly, on a licence exempt basis. While this may be a suitable arrangement in certain circumstances, unless there is constant demand for the generating plant’s output, the generator often will require grid access anyway so that surplus power can be exported to grid and revenue generated.

### Direct power purchase agreements

Direct power purchase agreements (“Direct PPAs”) can bring electricity consumers and generators together irrespective of location, generating capacity and supply requirement. From our experience, there are now two contractual structures prevalent in the Direct PPA market and these are summarised below.

Figure 1 - The “Contract for Difference (CfD)” Direct PPA structure (also known as the “price guarantee agreement” or PGA)



In Direct PPA structures, as the Generator is not supplying the Customer directly (as with a private wire), whichever structure is chosen the Customer will need an electricity supply agreement which is compatible with a Direct PPA structure, allowing the on-selling and crediting arrangements described in this paper.

A compatible supply agreement can be more complicated to put in place than standard electricity supply arrangements and it is likely that the Customer will need to have a sizeable supply requirement for this to be an attractive proposition for both

the Customer and its Licensed Supplier. As such it will not be suitable for all business customers. However, for a public or private sector organisation with significant electricity usage this kind of structure can provide considerable benefit, helping to help spread the risks associated with fluctuations in electricity prices by acting as a fixed price “hedge” against rising energy costs. In addition it provides a contractual link to an identifiable source of renewable energy generation.

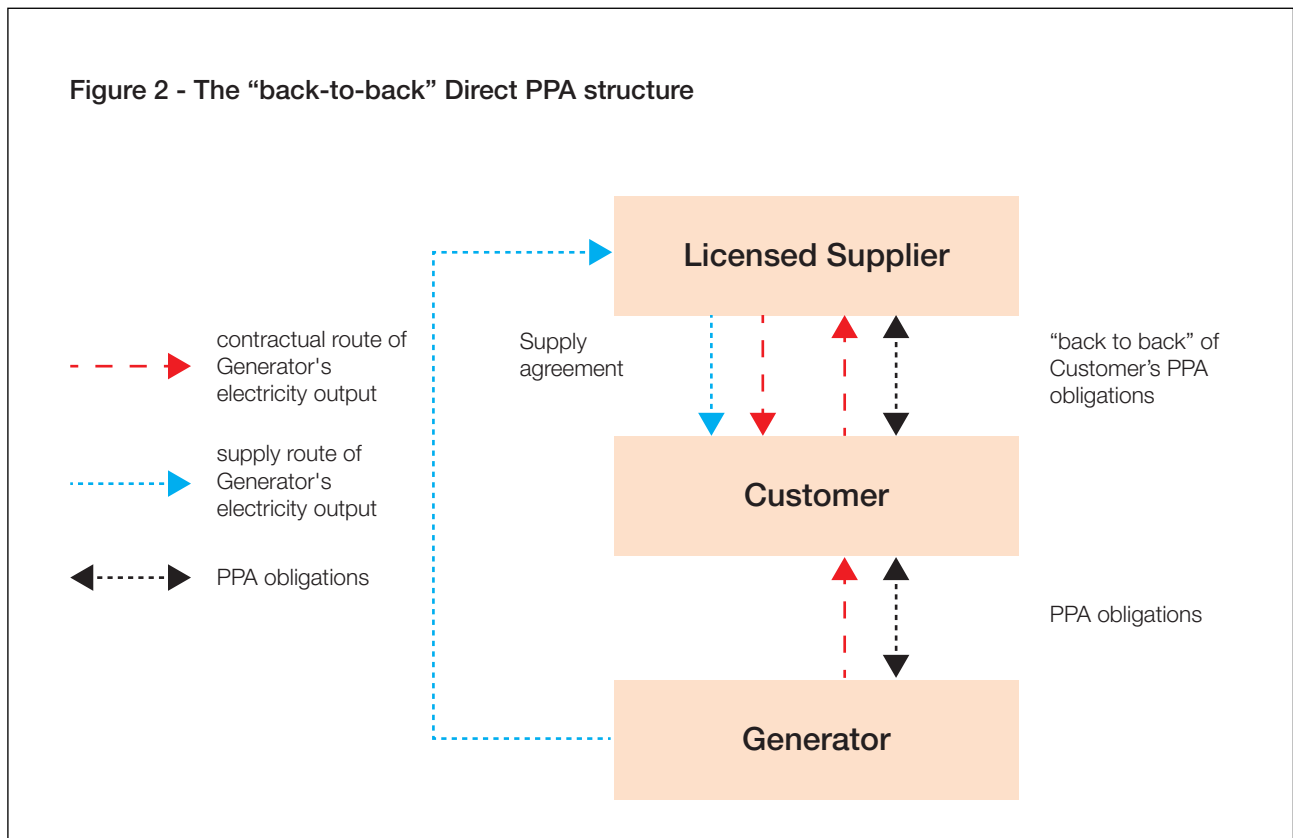


Figure 1 shows the CfD (or PGA) approach. In this model, the Generator contracts directly with the power off-taker (e.g. the Licensed Supplier) with power prices payable being linked to a specific wholesale market price (e.g. “day ahead” or “month ahead”). There is a separate agreement (the CfD/PGA) between Generator and Customer which provides the “price guarantee” mechanism fixing the power price to counteract market price driven fluctuations in revenues under the PPA. The advantage of this approach is that it can keep the Customer out of general PPA negotiations (the arrangements piggy back on the PPA). If similar arrangements are to be rolled out across a number of projects, an efficient standard form approach can be adopted. In such circumstances, we have found it is beneficial to have framework agreement between the Customer (who guarantees a fixed electricity price under the PPAs) and the Licensed Supplier offering PPAs to generators.

The “Back to Back” and “CfD/PGA” structures illustrated in Figures 1 and 2 combined with a compatible electricity supply agreement can be used to achieve broadly the same aims - instead of only buying electricity only from its Licensed Supplier, with a Direct PPA arrangement the Customer is able to contract directly with generators in connection with its electricity requirement. In Figure 2, the Customer on-sells the electricity (and renewable benefits) to its own Supplier, who “credits” the Customer’s electricity account with the corresponding amount of electricity. In Figures 1 and 2, the Licensed Supplier “sleeves” the generation into the supply arrangements between the Customer and Licensed Supplier. Associated renewable benefits can also be acquired by the Customer although in most cases these would need to be on-sold to a Licensed Supplier in order for their value to be realised.

## Pricing innovation

The pricing arrangements supporting Direct PPAs is without doubt the main reason why these structures have continued to gain traction in the market. While some developers are happy to take the risk that wholesale power prices will continue to rise, their funders are generally more cautious and look for guaranteed minimum power prices on which to base their lending decisions. Historically, Licensed Suppliers have been risk adverse, offering floor prices which are low when compared to prevailing market prices. On the other hand, corporates in the Direct PPA market have been prepared to offer (in some cases significantly) higher fixed prices which are very attractive to generators and attractive to their funders who can take these higher fixed prices into account in modelling generation income and specifying terms of funding.

However, things are starting to change and we understand that at least one of the major licensed suppliers will soon be offering more competitively priced PPA products as a direct result of the challenges posed by corporates entering the Direct PPA market. It would be surprising if other licensed suppliers did not follow suit. These include “cap and collar” PPAs where the market linked power price paid to the Generator is capped at an upper level but has the benefit of a significantly improved floor price. In addition, notwithstanding the cap, generators may be offered a percentage share of additional revenue where the power price exceeds the agreed cap. This could be a win-win for the generator. It remains to be seen whether floor prices offered will be as competitive as the corporates’ fixed prices.

We are also seeing a degree of maturity entering the Direct PPA market and have recently advised a sophisticated Customer with a portfolio of Direct PPA projects on arrangements for forward selling the output from its Direct PPA portfolio – allowing the Customer to actively manage its Direct PPA fixed price liabilities and potentially create additional revenue streams where it can secure forward prices in excess of its fixed price exposure.

## Direct PPA Advantages

A number of major licensed suppliers are currently providing Direct PPA compatible supply arrangements and we understand that more are coming to the market to take advantage of the continued interest in this kind of electricity purchasing. Licensed suppliers are also seeking out generators interested in this kind of arrangement as they have Customers who are keen to increase the percentage of renewables in their energy mix. This

is good news for Generators and large energy Customers as it should make it easier to put such arrangements in place and may reduce the tipping point at which the compatible supply arrangements become viable.

The advantages of the Direct PPA to Customers and Generators are:

- the generator can often obtain a significantly higher fixed price for its power than has traditionally been available – this can have a profoundly positive impact on “worst case” revenue modelling;
- the supplier takes the supply risk - the customer’s lights will not go out if the generator suffers an outage
- generators and customers have a significantly wider market available to them for the sale and purchase of electricity
- the customer is able to spread its exposure to pricing fluctuations by agreeing a fixed or floating price mechanism with the generator. This can complement the pricing arrangements under its general electricity supply agreement
- the Direct PPA structure enables the customer to demonstrate a commitment to renewable energy by identifying specific products and services that are powered by renewable energy from a specific generating facility.

Burges Salmon has advised on Direct PPA arrangements rolled out across tens of renewable energy projects and regularly advise on “traditional” on-site and export PPAs and energy supply contracts. If you would like to discuss any issues raised in this paper, or have any queries in about renewable energy generation, please contact us.

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