



MAKING SENSE OF MARKET TRENDS
– an ELEXON perspective

Encouraging local energy supply through a local balancing unit

In the *Community Energy Strategy* the government confirmed it would like to see the formation of decentralised energy markets. We take a look at how a minor change to the current rules might help nurture local energy supply.

Setting the scene

The current trading arrangements were not designed to support local electricity tariffs offerings. They are based on a trading model that assumes parties manage their physical positions and achieve contractual balance at a national level. The rules assume that participants are energy specialists, operate largely on a national basis and can trade their positions on wholesale markets. None of these conditions apply to local electricity trading, nor should they.

The most common route to market for smaller producers is through offtake contracts. These are at a discount to market prices because they offer a service and charge for the increased balancing risk the supplier faces. But producers should be able to capture more value themselves



from supplying customers directly. They will be able to secure market prices, capturing a greater share of benefits themselves. In theory, these higher values might be shared with local consumers in lower tariffs.

Electricity supply is a licensable activity, and as a condition of having a supply licence, the holder must also be a signatory to the BSC (and other designated industry codes). The BSC rules are complex, and the required meter registration systems can be expensive.

To address some of these issues and to improve market access for distributed generation schemes, the Department of Energy and Climate Change (DECC) introduced the 'licence-lite' supply regime in 2009.

This was specifically designed to allow a generator who wished to supply customers locally to use an established supplier to manage its interface at the heart of the BSC. We therefore assume a local tariff offering would be introduced to customers by a 'junior' supplier under the licence-lite approach, but outside of the BSC.

It is likely that existing players and possibly new entrants

will emerge to become local specialists without any specific interventions to change BSC rules. One existing domestic supplier has already indicated it intends to do so. However local tariff offers, if policy goals are to be met, also must be carried out by local players, including communities and local authorities.

This perspective considers how the BSC might facilitate local trading in a world of licence-lite supply. We asked Cornwall Energy to help us look into this issue.

Analysis of local tariff differentials

The starting point was to look at whether, under the current rules, a local supply tariff could be competitive with a regional offering from one of the large vertically integrated¹ suppliers based on typical regional prices in the market. To explore these cost differentials, four case studies and two variants (with consolidation) based on representative schemes with different supply scenarios were modelled. Each case assumed an arms-length relationship between the local supplier and the producer to estimate the cost of the energy to the supplier.

The schemes were intended to display different combinations of generation and demand, based on different technologies, customer types and locations. They have also been constructed to give different physical balances between generation and supply, showing both long and short supply.

Using the case studies we estimate the local supply options assessed in 2014 are up to 3.5p/kWh more expensive than the regional tariff benchmarks assuming revenues from surplus energy are not shared with the local supplier. Where costs sit within these ranges largely depends on the level that the local supply options and variants are exposed to for physical imbalance.

Generally however, local offerings would only equal regional benchmark offerings in circumstances where production and supply were engineered to ensure production always exceeds consumption. Given that most distributed generation is intermittent and based on small-scale but lumpy generation schemes, this will not happen.

This context led us to conclude that local tariff offerings based on purchase of decentralised electricity can be made by suppliers, provided they are compliant with Ofgem's Retail Market Review 'core tariff cap'. But there are significant cost differences that are likely to continue to encourage consumers to seek national suppliers with cheaper regional prices.

Possible rule change – local balancing unit

One obstacle to adopting a local energy supply arises under the BSC. This is as a consequence of the strong incentives that



exist to achieve balance, and which are reflected in offtake agreements through price discounts. We would expect similar discounts to be reflected in a supplier services agreement between a junior and a senior supplier. We have looked at the effect of introducing local settlement container and volume netting options under the BSC against the existing baseline. In all cases we have considered that this approach would narrow differentials against a position where the export and import were valued separately, and in some circumstances reverse them in favour of local offerings.

The preferred BSC change option to emerge from the work is to allow senior suppliers to register a bespoke unit in settlement on behalf of a junior supplier. The key enabling step would be to create a settlement unit enabling export and import meters within a Grid Supply Point (GSP) Group unique to a locality to be consolidated on its own. These units would be visible in settlement even if (as is likely) the senior supplier were to consolidate them into its own trading position.

This outcome could be achieved by including a new definition of a balancing mechanism unit (BMU), which is the unit of trade under the BSC. This could be called a Local Balancing Unit or LBU.

This change brings a number of advantages:

- if this were done under a licence-lite arrangement, it would enable the junior supplier's associated production and consumption to be netted by the junior supplier before it is added to the senior supplier's position.
- it could materially reduce exposure to balancing charges on the associated volumes through the commercial terms that the two suppliers would need to establish.
- the junior supplier could also identify and claim its share of embedded benefits directly from the senior supplier.
- from the senior supplier's point of view, creating a bespoke settlement unit would also ensure it were able to properly account for the junior supplier's volumes in reporting under government obligations and levies, ensuring accurate cost allocation. There would also be process benefits for reallocating meters in the extreme event of supplier failure.

By using this mechanism in 2014, Cornwall Energy's modelling suggests that this could reduce local tariff costs by up to 0.9p/kWh under an arrangement where a senior supplier might separately account for export and import meters in its terms with a junior supplier.

¹ Vertical integration refers to utilities that have structured their business operation to include both generation assets and supply customers. In this example it is the domestic tariff offerings of the Big Six energy suppliers: British Gas; EDF Energy; E.ON UK; RWE npower; Scottish Power; and SSE.



This step of creating a LBU could be seen as unnecessary as a newly entering supplier already has this facility at GSP Group level. There is also the facility of separately identifying different types of meter using separate supplier IDs and/or the additional BMU. However, the counter-argument to this is that it requires the fitting of national rules around localised application.

If the objective is to change to a new arrangement with local suppliers competing for local customers, readily moving their meters between senior suppliers and specialist consolidators, the BSC could be flexed to facilitate the existence of a local supplier active within a single region. The introduction of the LBU would achieve this, especially if accreditation for supply

could be carried out in a single GSP Group or selected GSP Groups.

We are keen to get your views on this and other topics related to local energy supply.

Please email ELEXON at market.operations@elexon.co.uk.

This report is one in a series developed by ELEXON, in accordance with our agreed business plan, to understand and fully participate in developments in our market place.

ELEXON is vital to the smooth operation of the wholesale electricity market. We compare how much electricity generators and suppliers said they would produce or consume with actual volumes. We work out a price for the difference and transfer funds accordingly. This involves taking 1.25 million meter readings every day and handling £1.5 billion of our customers' funds each year.

The rules are set out in the Balancing and Settlement Code (BSC). We administer the Code and provide and procure the services needed to implement it. Our expertise and impartiality give our customers the confidence that the BSC operates efficiently and accurately.

