

Energy for Londoners Feasibility Study

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The Greater London Authority is seeking to establish an energy supply company in order to offer fairer energy bills for Londoners. We were commissioned to conduct an evaluation of the Authority's options to enter the energy market as a supply company in order to deliver on social, environmental, and economic goals.

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Contents

1 Executive Summary	7
1.1 Purpose of this Report	7
1.2 Scope	8
1.2.1 Supply options considered	8
1.3 Overview of the Market	9
1.4 Evaluating Market Opportunities	11
1.5 Fuel poverty and energy measures in London	12
1.6 Energy for Londoners – structure	13
1.7 Conclusions	14
1.8 Recommendations and Next Steps	17
2 Energy Market Review	18
2.1 What is energy supply?	18
2.1.1 Value added services	19
2.2 The current market landscape	20
2.2.1 The re-municipalisation of energy	22
2.3 Regulatory and policy risk	23
2.3.1 Commentary on regulatory risk	25
2.4 White Label Plus	26
2.4.1 Introduction	26
2.4.2 Defining the option	26
2.4.3 Current status of white label partnerships in the market	28
2.4.4 Required legal and regulatory considerations	29
2.4.5 Overview of financial business models	29
2.4.6 Process for putting in place necessary arrangements	31
2.4.7 White Label partnerships and power procurement	31
2.4.8 Ability to transition to fully licensed supply	32
2.4.9 Partner-related risk	32
2.4.10 SWOT analysis for White Label Plus	33
2.5 Fully Licensed Supply	36
2.5.1 Defining the option	36
2.5.2 Current status of fully licensed supply in the market	36
2.5.3 Market entry	36
2.5.4 Required legal and regulatory considerations	37
2.5.5 Overview of financial business models	40
2.5.6 Process for putting in place necessary arrangements	42
2.5.7 Fully licensed supply and power procurement	44
2.5.8 SWOT analysis	44
2.6 Counterfactual – The “Business-as-usual” Option	46
3 Evaluating the Market	48



CORNWALL

3.1 Headlines	48
3.2 Defining the Local Market	49
3.2.1 Geographical Footprint	49
3.3 The GLA's Own Estate and Local Market	50
3.3.1 Social housing in the GLA's area	51
3.4 The Local Market	52
3.4.1 The Local Electricity Market	52
3.4.2 The Local Gas Market	54
3.4.3 Dual Fuel Penetration	55
3.5 Retail Competition trends	55
3.5.1 Residential Market	55
3.5.2 Business Retail Market	56
3.5.3 Recent Trends in Market Entry	56
3.6 Churn	58
3.6.1 Residential Customer Switching	58
3.6.2 Business (SME and I&C) customer switching	60
3.7 Tariff Spectrum	61
3.7.1 Tariff Spectrum	61
3.8 Local Generation	65
3.8.1 Embedded and Renewable Capacity in the Region	66
3.8.2 Embedded Benefits	67
3.9 Gas and Electricity Distribution Networks	69
3.9.1 GDN plans	69
4 Evaluating the Options	71
4.1 Delivery of social ambitions	71
4.1.1 Social tariffs	71
4.1.2 Warm Homes Discount	72
4.1.3 Energy efficiency	72
4.1.4 Smart meters	73
4.1.5 Commentary on smart meters	74
4.1.6 Other	75
4.2 Environmental opportunities	75
4.2.1 Public authority-owned generation	75
4.2.2 Contracting with local generation	76
4.3 Risks	76
4.3.1 Financial	76
4.3.2 Brand	79
4.3.3 Contractual	80
4.3.4 Timescales	80
4.4 Regulatory risk	80



4.5 Other options	81
4.5.1 Purchase of an operational existing fully licensed supplier	81
4.5.2 Taking equity in an operational existing fully licensed supplier	82
4.6 Governance Options	82
4.6.1 White label plus	83
4.6.2 Full supply licence consortium	83
4.6.3 Fully supply licence—mutual	84
4.6.4 EfL structure considerations	84
4.7 Recommendations	85
4.8 Recommendations and Next Steps	88

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1 Executive Summary

1.1 Purpose of this Report

The Greater London Authority (GLA) is exploring a range of energy supply opportunities to allow it to play an active role in the local energy environment as the wider sector continues to transition to a more decentralised, lower carbon, and “smarter” outcome.

Local authorities historically played a pivotal role in the provision of energy services during the first half of the last century. This position ceased with the nationalisation of the gas and electricity sectors after the Second World War. Despite the gas and electricity sectors being privatised in the 1980s and competition fully introduced in the 1990s, it is only in the last few years that local authorities and other public sector entities have begun to investigate their position and long-term strategy in the energy market. This has been partly driven by change in legislation that allows local authorities to undertake more commercial activities but also wider central government policy to decarbonise the economy.

However, we observe that a key driver for local authorities seeking to become a player in the market place is that, despite 18 years of full retail competition, the market continues to fail the most vulnerable in society, and that the “municipalisation” of energy has the potential to address these concerns and deliver wider local and regional benefits. At a high level an authority-backed energy company will not necessarily need to generate high profit levels to satisfy shareholders and as such can focus on a sustainable business model with specific aims. For example, utilising existing relationships with communities and support groups to provide keenly priced energy products to low-income households (private and public). These customers typically pay more than the conventional market offers, but due to reasons such as lower consumer proficiency skills (including access to the internet), precarious household budgets (including no access to bank accounts), and thermally inefficient housing, remain on inappropriate and expensive tariffs.

Unlike most private energy companies, those backed by public authorities can also deliver a long-term (e.g. decades) energy strategy that looks to leverage in private and public investment in local energy infrastructure. The electricity sector particularly is undergoing structural transformation as older large-scale fossil fuel power stations retire and the costs of “decentralised” generation technologies fall. Municipal energy companies have the potential to facilitate investment in local generation (including cogeneration of heat and power and the emerging battery storage market) by offering long-term contracts to purchase the output from local assets; this is a key consideration for all power projects—the need to find a buyer for their output.

Many local authorities are considering greater participation in the energy market to facilitate the delivery of wider sustainability programmes. These variously include regeneration areas with “energy centres” that supply heat and power to residents, the public estate and commercial premises. Some are investigating how to make best use of electricity generated from proposed energy-from-waste plant, while others are looking at long-term joint venture arrangements to deploy “micro-grids” that are largely energy self-sufficient. Additionally, where energy products are properly targeted, including energy efficiency advice and measures, the knock-on benefit could be a lower call on the local social care spend as a result of the increasing weekly household budgets and the health benefits of warmer, dryer homes.

At the customer end of the market, it is intended that all households will have been offered smart meters by the end of 2020. While there are questions around whether the full rollout will be complete by this time, the majority of homes should have smart meters by the end of 2020. This technology has the potential to not only offer more tailored products to end users (such as time of use tariffs, improved consumption information,

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and a wider range of payment options) but also to help with the delivery of social and environmental initiatives. Again, an example of this is to make use of more granular data to more easily identify residents requiring energy efficiency advice or installations. The smart metering infrastructure also allows for additional devices to communicate via the meter and could be used to provide emergency alerts if a vulnerable person living on their own requires assistance.

1.2 Scope

In view of these developments Cornwall was commissioned to provide advice and support for the GLA in selecting a route for the creation of the Energy for Londoners (Efl) energy supply company.

The key ambitions for Efl include:

- Reduction and alleviation of fuel poverty and energy bill debt amongst Londoners through fairer, more affordable tariffs
- Reduction of carbon dioxide emissions through the promotion and improvement of building energy efficiency
- Encouraging generation of low carbon energy through provision of a stable market for it
- Minimisation of the need for investment in additional infrastructure by managing energy demand more effectively and efficiently

The alleviation of fuel poverty is the principal goal, to be achieved through the provision of gas and electricity to the residential market. However, operating into the commercial market—particularly the public sector—is not out of scope. Profit-making is specified as not being a primary objective; any surplus that is made would be re-invested in fuel poverty and energy efficiency programmes, or other social objectives¹. However, Efl would have to be a sustainable business, i.e. one which is non-loss making at a minimum.

1.2.1 Supply options considered

The household energy customer is one of the most protected consumers in the GB economy. As such the regulatory framework within which any entity seeking to retail gas and electricity must operate can appear onerous at first sight. The first part of this paper sets out the regulatory requirements and provides commentary on the emergence of third party service providers that offer products that allow new entrants to outsource much of the arcane areas of industry process and compliance (at least at the outset). This allows new market entrants to focus on their core business strategy.

For this report, Cornwall were tasked with examining two of the main routes to market:

- **White label plus**— this option would see Efl partnering with an existing licensed supplier, enabling a GLA (and potentially partners) backed company to provide tailored and branded energy tariffs to customers in its area. The “plus” approach to white label is a recent development where some fully licensed suppliers have begun to offer additional benefits, payments, or freedoms for their white label partners than has been typically the case

¹ We define Efl as being a commercial entity which itself would re-invest any surplus into social initiatives. While Efl may operate on a not-for-profit basis, whether as a fully-licensed or white-label supplier, it is possible that its counterparties may not be not-for-profit. In the case that the GLA contracts with for profit entities, the GLA will need to assure itself that the overall aims of delivering fairer energy bills and benefiting Londoners are met.



- **Fully licensed supply**—becoming a holder of an Ofgem-granted licence to supply energy from the outset to end consumers, with EfL handling all the central industry compliance itself. As a part of this we were also asked to consider the relative impacts of mutual or cooperative structures on fully licensed market entry. Both these structures have the same licensing requirements and so exposure to industry costs and compliance, although different potential governance and funding arrangements which can have significant impacts on the set-up and operation of the supplier.

Both of the two main options are broken down to set out the regulatory requirements necessary to achieve them; a summary of the functions/ responsibilities of parties involved in the arrangements; and a Strengths, Weaknesses, Opportunities, Threats (SWOT) analysis of the approaches. We have also provided commentary on a “business-as-usual” approach to highlight the potential missed opportunity or benefits where the GLA does not pursue a more direct presence in the energy markets.

To direct which of the opportunities are most appropriate for EfL this paper sets out an in-depth assessment of the London regional energy retail market. This presents information on domestic (household) and non-domestic (business) customer numbers in London and the surrounding regions, customer switching rates, current tariff prices in the region and nationally, levels of distributed generation in the area, and the energy supplier landscape.

1.3 Overview of the Market

To permit sales of gas and electricity to end consumers it is necessary for an entity to hold an Ofgem-granted licence². This regulatory framework is designed to ensure customers are sufficiently protected when engaging with their supplier and in simple terms set out expected behaviours of the supplier. The energy retail markets are also framed along the lines of the so called “supplier-hub” principle. In effect, this means that the supply licence holder is responsible for paying the relevant owners of the gas and electricity network infrastructure for moving energy over their assets to the customer property. The supplier is also responsible for ensuring the customer has an appropriate meter. It should be noted that the licence requires the sale of gas and electricity to any customer in GB—there is no “local licence”.

In addition to these core retail principles it is a long-established market characteristic that much of the government’s energy policy related to energy efficiency, subsidy of low-carbon generation, and social programmes is delivered through suppliers—the rationale generally being that the supplier has the contractual relationship with the end consumer and so can deliver measures (e.g. energy efficiency installations) and collect subsidy for onwards payment to generators.

Despite these regulatory constraints there are three well understood options that any entity seeking to offer gas and electricity products to customers can pursue. In all cases the entity is either licensed itself (licence lite or fully licensed) or partners with an existing licence holder (white label). We have not examined licence lite in this report as the GLA is in the process of securing a junior supply licence to sell low carbon electricity to Transport for London and the public sector.

The choice of which approach is most appropriate boils down to the ambition of the entity with regards to the scale and scope of what it hopes to achieve in the retail market, the risks it is prepared to take, and the funding it has available. Generally, where an authority seeks to provide energy products in its locality the appropriate option is a function of the size and contestability of the market. This then determines whether

² In certain small, site specific cases it is possible to supply without the need for a licence—such as onsite supply at an industrial site. We briefly touch on possible approaches in this report, but given GLA’s ambitions it is not an appropriate option for meeting the principal objective.

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analysis of the market shows that there are sufficient customer numbers and supply volumes over which to defray initial investment, provide products that will attract customers, and give a high degree of confidence that the supply function can be solvent.

Table 1.1 Comparison of market entry routes

	White Label Plus	Fully Licensed
Investment requirement (set-up and ‘at launch’ staff requirements)	£490,000 to £825,000	£2.375mn to £3.125mn (plus working capital/credit cover in the region of £10mn)
Time to launch from point of financial close (i.e. from signing contracts with major suppliers. Note, these are average times, individual initiatives may take more or less time)	3 months	12 months (min) – 18 months
Revenue retention	Low/Medium (ongoing payment per meter/year)	High (all customer revenue)
Regulatory compliance	Low (typically partner provides sales/marketing material and compliance activities)	High (all requirements—but can outsource)
Pricing/ product flexibility	Low/Medium (partner supplier typically sets prices based on market forces, but opportunity for white label to flex some elements)	Medium/High (greater control over offerings, but subject to market forces)
Staff requirements	Low (typically sales agents, marketing, and contract management)	High (customer facing retail activity and central industry compliance)
Proven ability to deliver	Mixed—although white label is well understood the emergence of ‘plus’ providers is a relatively new addition to this partnering approach and delivery of hoped for outcomes is not yet proven	Conventional route—tried and tested with ability to outsource many obligations. However, ability of publicly backed suppliers to deliver objectives sustainably is not yet proven
Major risks	Over time local tariff becomes more expensive than prevailing market prices (contract would need to be considered to mitigate this risk) Less room to negotiate on price/ product compared to fully licensed option Customers may be lost on contract lapse with partner supplier	More money at risk due to greater setup costs and working capital, so cost base may be too high, leading to higher tariffs for a number of reasons: <ul style="list-style-type: none">• Customer growth assumptions do not materialise• Poor implementation



	Indirectly exposed to market and regulatory risk	<ul style="list-style-type: none"> High set-up and ongoing costs are not recovered
	Less ability to align with other programmes, including underwriting long-term offtake contracts	Directly exposed to market/ regulatory risk so prices would reflect the market realities and implementation choices
Opportunities	<p>Scale of potential market and ‘kudos’ could result in greater flexibility for contract/ prices, can try to negotiate some flexibility in contract</p> <p>Test appetite for local energy brand</p> <p>Reduce energy costs for more vulnerable disengaged customers</p> <p>Provide small but steady income stream for reinvestment</p> <p>Potential as a stepping stone to a licensed approach</p> <p>Links to energy efficiency and fuel poverty support programmes</p>	<p>Flexibility for product/ prices</p> <p>Can be aligned with other programmes, including the purchase of local generation</p> <p>Ability to underwrite long term offtake contracts with generators</p> <p>Reduce energy costs for more vulnerable disengaged customers</p> <p>Links to energy efficiency and fuel poverty support programmes</p>

A recent trend observed in the retail market is the offering of packaged products by established service providers to suppliers. This allows for *licensed* new entrants to procure the necessary IT systems to interface with market administrators (e.g. paying network charges, provision of meters, collecting and validating meter reads, processing customer switching, etc.) and, to varying degrees, outsource elements of the more complex compliance aspects of energy retail. The “one-stop-shop” approach enables new entrants to reduce initial market entry costs and times (albeit they are still significant) and focus on retail activity. This approach has been one of the key reasons for the rapid growth in the number of suppliers now active in the market and was adopted by Bristol Energy (established by Bristol City Council) and Robin Hood (established by Nottingham City Council).

1.4 Evaluating Market Opportunities

The gas and electricity markets operate on a regional basis in terms of determining charges for supply as each regional network has varying costs associated with maintaining and investing in their infrastructure. The energy market regions therefore do not overlap directly with the GLA’s footprint. Due to this we have focused on the London GSP³ region.

Our assessment of the contestable market⁴ shows:

- 312,129 households in London switch electricity supplier a year

³ GSP = Grid Supply Point area, a term used to describe the 14 regional distribution networks.

⁴ We assess the opportunity for any supplier to win new customers by the level of switching recorded as this reveals the number of accounts that can be contested.



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- 43,461 business meters (note: meters are not the same as sites/ contracts) in London switch electricity supplier a year
- 248,500 households in London switch gas supplier a year
- 7,515 business meters (note: meters are not the same as sites/ contracts) in London switch gas supplier a year

The estimated annual spend for these customer numbers is significant. We have provided an indicative view on the estimate annual spend for both fuels below⁵ in Table 1.2.

Table 1.2: Estimated contestable market annual spend

Area	Sector	Estimated annual contestable market (MWh)	Estimated annual consumer spend of contestable market - electricity (£)	Estimated annual contestable market - gas (meters)	Estimated annual consumer spend of contestable market – gas (£)
London GSP region	Domestic	1,046,854	157,028,143	3,307,997	132,319,884
	Non-domestic SMEs	634,562	82,493,086	3,500,799	87,519,979
	Non-domestic I&C	2,415,798	241,579,850		

1.5 Fuel poverty and energy measures in London

Fuel poverty is measured in England using the “low income-high cost” approach, which states that a household is in fuel poverty if income is below the poverty line (taking into account energy costs) and energy costs are higher than is typical for their household type. Latest figures⁶ (2014) show that 348,000 households in London are in fuel poverty. The fuel poverty gap (the amount needed to meet the fuel poverty threshold) in London is £336/household/ yr.

⁵ Please note that these numbers are intended to only be indicative representations of the potential total spend that customers in these brackets would make. This is based on an assumed annual spend of £40/MWh and non-domestic spend of £25/MWh for gas supply and an assumed domestic spend of £150/MWh, non-domestic SME spend of £130/MWh and non-domestic I&C spend of £100/MWh for electricity consumption.

⁶ <http://www.nea.org.uk/the-challenge/fuel-poverty-statistics/> - please note that new data has been published since report finalisation



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The level of feed in tariff (FiT)⁷ installations is well below the national average, probably due to the higher proportion of rented accommodation where landlord approval is needed to install such measures. This is also likely to reflect the larger proportion of tower blocks in London compared to the national average (albeit they represent a very small proportion of overall stock).

The rate of energy supplier led installations of cavity wall and loft insulation is also well below the national average, as shown in table 1.3.⁸ While the exact causes of this are unclear it is probably partly due to the higher level of rented accommodation.

In turn, this means that Londoners are, on average, paying for the nationwide delivery of FiT and insulation measures but receiving a lower proportion of installations.

1.6 Energy for Londoners – structure

It is our assumption that an EfL entity will be led by GLA with direct participation from some or all of the 32 London Boroughs. The GLA also wants to ensure accountability and transparency to the local community. The commercial structure of EfL is therefore critical to allow it to operate commercially while ensuring governance arrangements are sufficiently flexible to allow numerous interested parties to be meaningfully involved in delivering EfL's core objectives.

Three options are considered by the GLA: white label plus; full supply licence consortium; and full supply licence mutual. Although the licensing arrangements do not make reference to the legal and commercial structure adopted by a supplier it does have a large bearing on EfL delivering its aims and garnering support from a variety of actors.

Expert advice will need to be sought on the detail of company structures, but we make the following observations and points for consideration:

- creating an agreed company and governance structure that balances the need for GLA, London Boroughs, and other third sector organisations to determine the business strategy and set out how surplus revenues are re-invested against the need for EfL to have the flexibility and control necessary to run a business operating in a complex and highly regulated sector
- establishing a workable governance model that ensures clear delineation of responsibility for the company (and subsidiaries) and shareholders (including potential joint venture, third sector, and London Boroughs) and sufficient flexibility to allow additional parties to join over time (if not all are able to do so at the outset)

Table 1.3: Energy market measures – London vs. National average

	National Average	London
FiT (installs/10,000 households) Sep 2016	278.7	57.6
Fuel poverty (England) 2014	10.6%	10.8%
Loft Insulation (CERT*) installs/10,000 households	1365	634.3
ECO measures (installs/10,000 households)	78.9	40.8
Cavity Wall Insulation (CERT) (installs/10,000 households)	904	404.7

*The Carbon Emission Reduction Target (CERT) was the energy supplier obligation that was replaced by the Energy Company Obligation. CERT ran from 2008 to 2012.

⁷ Feed in Tariffs (FiTs) is a programme that pays eligible (mainly renewable) small scale generators for all units generated and separate payments for units exported to the local network.

⁸ <https://www.gov.uk/government/organisations/department-for-business-energy-and-industrial-strategy/about/statistics>

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- sufficient legal resource to put in place a governance structure and subsequent formation of a company that includes opening a company bank account, access to line of credit/ collateral (for fully licensed supply), recruitment of staff, and clear roles and responsibilities of executive management and board members
- describing KPIs/ reporting requirements for company/ board
- defining in detail the short, medium and long-term strategy for EfL. We envisage this as being a consultative process but also necessary to gain backing from key stakeholders and the wider community
- depending on the option ultimately selected developing (and evolving throughout the project) a Target Operating Model that clearly describes how the necessary functions will be delivered—those that can be done in-house and those that are to be outsourced.

Regardless of the option selected it will be a prerequisite to have EfL formally constituted prior to any meaningful engagement with counterparties to commence. It should be possible for the GLA to undertake soft market testing before EfL is formed to gauge the appetite of potential partners to contract with EfL, but no formal negotiations can commence until the counterparty has clear sight of the form of partner it will contract with.

As a consequence, we believe that this introduces significant risk to create an operational EfL company quickly and is likely to take until at least late 2019, especially for the fully licensed options as the governance arrangements will necessarily be more complex as EfL will need to be able to draw on credit/ collateral, agree contracts with wholesale energy trading counterparties and be able to draw down significant funding to set-up as a licensed supplier.

1.7 Conclusions

Table 1.4 overleaf summarises the supply options which have been assessed against the GLA's stated ambitions for EfL. We have weighted these against our assessment of the GLA's priorities, as set out below.

	Investment requirement	The models incur significantly different expenditure to become operational and for subsequent access to working capital until EfL breaks even. We assume higher investment requirements present greater risk for the GLA to commit to an option (although ultimate benefits may be higher in the long-term)
Higher priority	Targeted Tariffs	A key objective of EfL is to deliver more appropriate energy tariffs for Londoners that have not been well served by the conventional energy market.
	Opportunity to address fuel poverty	This is the primary, but not only, objective of EfL. Addressing fuel poverty will include targeted tariffs but also other initiatives such as energy efficiency measures, advice (e.g. debt, finance, benefits 'health-checks') and signposting to third sector bodies.
	Be operational as quickly as possible	Supply models for EfL are aimed to be operational as quickly as possible, so as to start delivering benefits to customers as soon as possible.
Lower priority	Revenue opportunities	Any surplus revenue would be re-invested into social and environmental objectives. While it is the case that under either options end tariffs will



	have to change in response to cost movements, a fully-licensed supplier has more opportunity on when and how to pass through any changes (e.g. by tariff type, region, pricing structure (standing charge and unit charge), payment method, fixed or variable, margin, etc.).
Delivery of Energy Efficiency	At the outset EfL would have relatively limited opportunities to deliver energy efficiency measures directly. We believe opportunities do exist (e.g. via a licensed supply partner or third sector groups) but, as an <i>energy supplier entity</i> , formal obligations would only fall on EfL once it has 250,000 household accounts. However, it could provide an important focal point for referring customers to GLA's energy efficiency retrofit programmes.
Delivery of environmental ambitions	Reduction of carbon emissions and promotion of renewables is an important objective for EfL. However, at the outset we recommend full focus is given to the primary objective of tackling fuel poverty, with environmental benefits being realised where possible. This prioritisation will evolve as EfL is fully established and the cost of low carbon generation continues to fall.
Local Generation Investment	Depending on the supply option, EfL could facilitate investment in local renewable investment by providing a route to market for output (directly or via a white-label partner). At the outset though we recommend efforts be focused on supply, as local generation is a specialist activity. It could also link to GLA's Decentralised Energy Enabling Programme, Solar and Community Energy support.
Smart meter delivery	All suppliers must aim to install smart meters in every home in England, Scotland and Wales by December 2020. Given the timescales envisaged for EfL to become operational there would be little time to prioritise smart pre-payment meter installations for its customers, as all customers would need a smart meter installed in order to reach the deadline. Nonetheless we believe all options considered should allow for this.

For the purpose of providing the 'at-a-glance' evaluation of the supply options we have applied double weighting to the higher priority ambitions scoring (shown in square brackets and bold font), as we have taken the view that it would undermine the purpose of EfL if these cannot be delivered.

Each aspect has been given an initial unweighted score, based on Cornwall Insight experience, of between 1 and 5, with 5 delivering the greatest benefit/ least risk. Note that these figures are purely illustrative and do not reflect the direct proportion of costs and benefits. Numbers in square brackets are the weighted scores.

Table 1.4: Evaluation of routes to market

	Investment requirement	Revenue opportunities	Local Generation Investment	Targeted Tariffs	Delivery of Energy Efficiency	Opportunity to address fuel poverty	Delivery of environmental ambitions	Smart meter delivery	Be operational as soon as possible	Total score
Business-as-usual ⁹	5 (based on least risk)	1	1	1	1	1	1	1	1	14
White label supply	3 [6]	2	2	4 [8]	3	3 [6]	3	3	5 [10]	43
Fully licensed supply	1 [2]	4	3	4 [8]	3	3 [6]	3	2	1 [2]	33

We **do not think that fully licensed supply** is a suitable option to deliver the EfL goals quickly. This is the primary reason for **preferring white label plus**, with the possibility of **transitioning to a licensed position at a suitable point in the future**. London is certainly large enough to warrant a full licensed supply company being established to focus on providing products for Londoners. A secondary reason is that fully-licensed supply carries with it **considerable cost and financial risk**, while the lower costs involved in white label supply may be more manageable.

It has been shown that it is possible to establish a fully licensed supply company within 12 months, but this is starting from the position of having the preparatory work completed, which includes a full business case, funding, and governance/ company structure in place to allow contract negotiations with third party providers to commence. Given the complex and wide-ranging nature of these discussions and modelling work needed we consider that it is unlikely that this could be completed in a shorter timescale than 12 months. We believe that appropriate commercial and governance arrangements should be identified **prior to commencing contractual negotiations**. The arrangements will be an order of magnitude more complex where EfL adopts a licensed approach as opposed to a white label plus partnership arrangement, as EfL will have ultimate responsibility for trading, accessing significant levels of working capital and credit/ collateral.

Moreover, the **energy retail markets are subject to extraordinary regulatory uncertainty at the moment**. We see the primary regulatory risks for any new entrant being the potential for direct government intervention to set some retail prices (which could undermine the business case), significant changes to central industry processes that will require all suppliers to adapt IT systems (e.g. next day switching, mandatory settlement of electricity customers, changing to a 'principles based regulation' supply licence) and real concerns that the industry-wide smart meter roll-out will not be possible in the decreed timescale. This last point is particularly

⁹ This is a "business-as-usual" counterfactual of not engaging in energy supply. Note that we do not make commentary on the GLA's ongoing energy efficiency programmes, etc, as these are assumed to continue under an energy supply model.

problematic for smaller and newer suppliers that do not have the negotiating power of established players in seeking necessary asset providers and installers.

Therefore, on balance, we believe it might be possible for EfL to enter the market in late 2019 as a fully licensed supplier, but we see the **risks of meeting this timeframe as being too high** to recommend this option. White label plus provides a means of delivering the GLA's objectives around fuel poverty and providing fairer tariffs, but with **lower commercial risks and shorter delivery timescales**. This approach, if a suitable partner can be found, would allow EfL to provide targeted tariffs to Londoners and additional services (such as energy efficiency installations/ advice, potential for selling local power to Londoners, etc.) and could be used as a stepping stone to transition to a licensed position at some point in the future. The partner approach would also allow EfL to build brand presence and gain useful experience of the energy markets.

The white label plus option is contingent on the GLA being able secure sufficiently attractive terms for the EfL offering. While these are down to the GLA to determine, we would recommend that the below are the key negotiation points for setting up a white label:

- Annual retention payments for each customer to ensure a steady ongoing revenue stream (whether in addition to or in place of an acquisition fee)
- A degree of flexibility in the tariffs it offers, both in structure and level
- Ability to shape the smart meter rollout, considering that some slippage beyond the government's 2020 target is likely, and particularly the prioritisation of the rollout of smart meters to prepayment meter customers
- Contractual certainty to provide assurance that customer tariffs will always be 'reasonably' priced
- Potential flexibility for contracting arrangements over the medium to long term, whether with local generation or wholesale trading arrangements

1.8 Recommendations and Next Steps

Based on our findings and assessment we recommend that GLA look to undertake the following activities to progress the market entry strategy to the next stage:

- As a matter of priority facilitate discussions with London Boroughs and large Housing Associations to determine the appetite and drive to act together and fund an EfL supply entity. Discussions with London Boroughs should explore their current energy supply arrangements to ascertain if EfL could viably compete for their own estate contracts
- Undertake detailed market testing with white label providers to fully understand what they are offering.
- Having completed the testing and discussions, develop a detailed financial model for agreed approach
- Create a Target Operating Model (to include required resource for the market entry into households as soon as possible) and appoint an independent Business Development Manager with sufficient resource and flexibility to deliver this

2 Energy Market Review

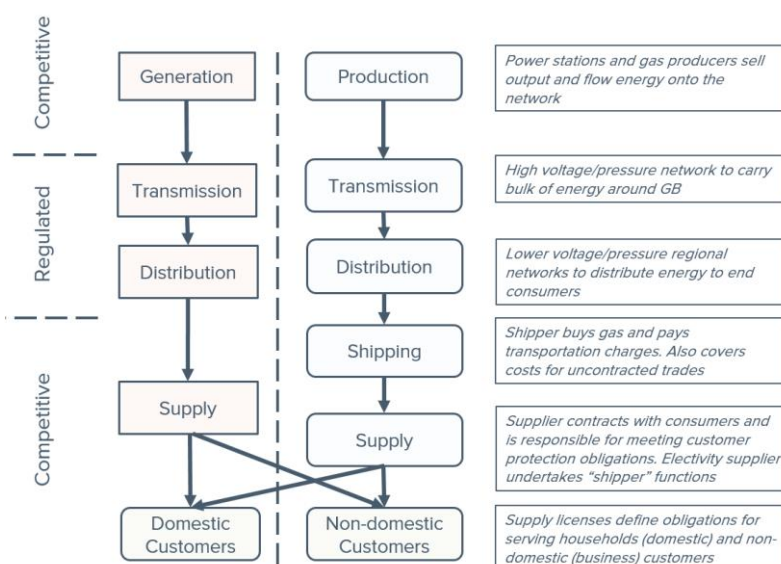
In this section, we provide a high-level view of the energy supply market, current trends, and the most prominent routes to market available to the GLA for retail supply.

2.1 What is energy supply?

An energy supplier contracts to deliver electricity and/ or gas through a meter to a customer. Supply contracts allow customers to access products with predictable costs that match their appetite for price risk; for example, variable or fixed term tariffs for domestic customers. Once contracted the supplier will register the customer¹⁰, raise bills, collect payment, and manage the customer relationship until the contract ends.

The GB retail market operates under a concept known as “supplier hub”. This means that the supplier is the single point of interaction and co-ordination with the customer (except for loss of supply, such as due to storm conditions) and is responsible for managing upstream activities through a wide variety of commercial contracts and regulated industry codes. A simplified schematic is shown below in Figure 2.1.

Figure 2.1: GB gas and electricity market value chain



Suppliers must ensure that enough energy is brought on to the system to match that taken off by their customers¹¹, arrange with the network operators for the energy to flow across their assets, and ensure that energy taken off the system is properly metered. This drives a large proportion of the cost of supply, which includes wholesale energy, networks, and government environmental levies. As such, the supplier acts as the main point of cash collection for these upstream activities.

Suppliers are incentivised through the market design to forecast customer consumption and purchase required energy volumes in the wholesale market. On a regular basis (every 30 minutes in electricity and

¹⁰ This process assigns the customer meter to the supplier so that the central industry systems apportion costs to the correct supplier.

¹¹ This is necessary from an engineering perspective to ensure voltage/ gas pressure remain within safe operating limits.

every day for gas—known as the “settlement period”) the volume of contracted energy purchased to deliver across the system is notified to the relevant System Operator¹². In real time the System Operator ensures that, given the commercial decisions made in the wholesale markets by parties putting energy onto the systems (i.e. generators and gas producers) and those taking energy off the systems (i.e. gas shippers and electricity suppliers), supply and demand are matched and therefore the system remains within safe operational limits.

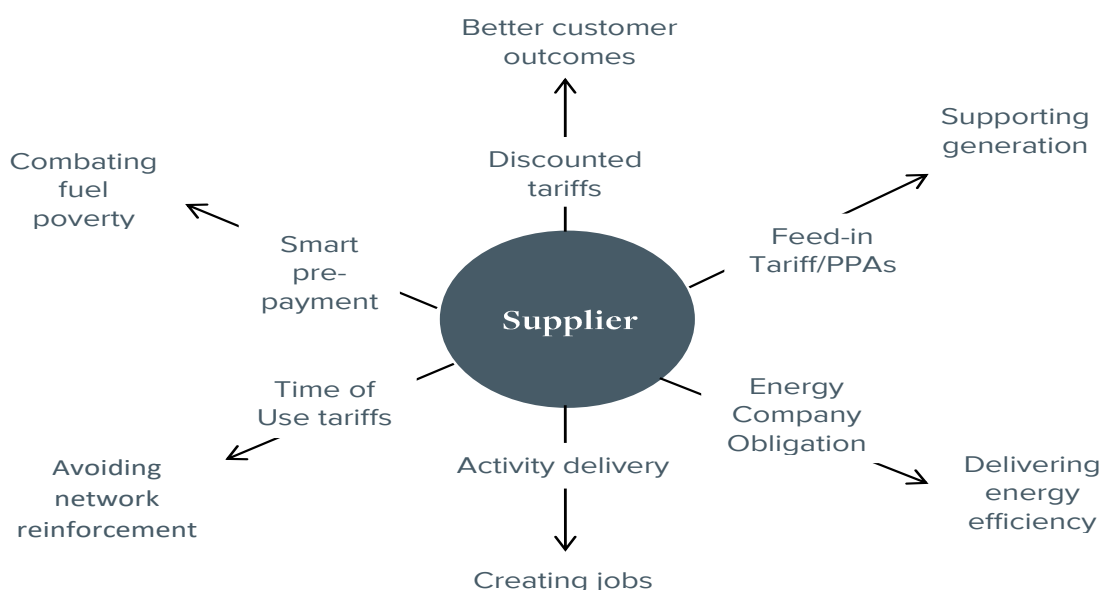
Where the System Operator must act to correct imperfect wholesale trading behaviour it will recover its costs through “imbalance charges” that are levied on all parties. Imbalance volumes are the difference between wholesale energy contract volumes notified and the actual energy put onto or taken off the system, as determined by data from meters. Because imbalance charges are not known until after each settlement period has passed and are designed to be unattractive, the market design incentivises all parties to trade in the wholesale market to the best of their ability.

2.1.1 Value added services

This market structure presents difficulty for organisations seeking to take a role in the energy sector without first becoming suppliers. It is common for new entrants to use their supply company not as an end in itself, but as a delivery vehicle for their objectives. For example, Ecotricity was mainly concerned with renewable generation, but generation assets are most useful when that company also has customers to guarantee a market for their electricity. Similarly, Flow Energy entered the market with the aim of selling its micro combined-heat-and-power boilers, which it could most effectively do by packaging them as a value-added service alongside energy tariffs.

Energy suppliers are therefore central to most industry initiatives and the on-going energy transformation in GB. Figure 2.2 (*below*) illustrates how suppliers may achieve objectives beyond retail of gas and electricity. For example, suppliers deliver energy efficiency measures under the Energy Company Obligation, and can sign Power Purchase Agreements (PPAs) with generators. Pre-payment customers can be prioritised for smart meter installation to give them more control over the energy use, and time-of-use (ToU) tariffs can be offered to incentivise demand switching to maximise use during peak renewables generation times, and so address constraints in the local network. Suppliers can also offer the Warm Homes Discount to eligible customers too. Larger suppliers (above 250,000 accounts) are mandated to offer this whereas smaller suppliers can elect to do so.

Figure 2.2: Application of the supplier hub principle



¹² Great Britain, England and Wales

2.2 The current market landscape

The GB energy supply markets are at their most competitive since the retail markets fully opened in the late 1990s. Since 2011, the proportion of domestic supply represented by “independent” companies—those other than the six largest suppliers, or Big Six—has grown from less than 1% to almost 16% at the end of October 2016. There are now more than 50 suppliers operating in the GB energy sector, operating across the residential and business markets, with 21 entering the domestic market in 2016.

One of the most significant obligations to come out of the Competition and Markets Authority’s (CMA’s) two-year review of the energy sector, which concluded in summer 2016, is the prepayment price cap. This is a requirement on all domestic suppliers to ensure that the prices they charge customers on non-SMETS ¹³ smart meters do not exceed a certain annual level. The prepayment price cap is designed to lower the charges faced by prepayment customers as the CMA felt this segment of the market was less able to engage. As this cap is standardised across all suppliers it will limit the ability of the EfL supplier to distinguish itself from other suppliers when trying to engage this segment of the market. However, experience so far shows that it is still possible to price below the cap, and price is not the only important aspect of a supplier’s offer (e.g. customer service and credit terms). The cap will also ensure lower charges for these customers regardless of their supplier and so potentially weaken the logic for entering the market to address fuel poverty, though not all fuel poor households are on pre-payment meters. GLA should also consider fuel poverty more widely and what other tariff offers could be developed to help fuel poor households. We will examine the impact of the price cap further in section three.

Despite, or potentially because of, the conclusion of the CMA’s investigation and the remedies it set out we have seen an increased political focus on the retail energy market. To a large part this has been driven by several price rises that were announced by several suppliers in response to rising wholesale prices late last year, and have now come into effect. This re-ignited the debate around the level of prices paid by customers on standard variable tariffs and led to both the Conservative and Labour parties making manifesto commitments to cap standard variable tariffs.

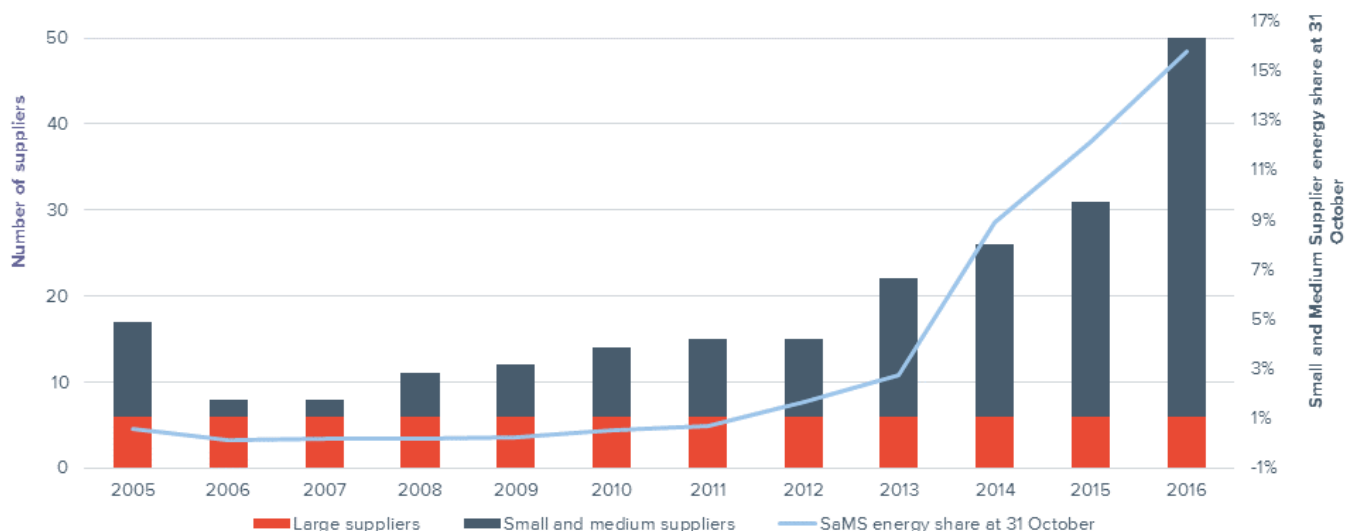
Data from Ofgem shows that in 2016 switching was at the highest level since 2010, with more than 4.4mn electricity switches and 3.4mn in case ¹⁴. This was an overall 28% rise compared to 2015. With switching consistently up year-on-year, there is little sign of the momentum of the independents abating.

Figure 2.3, overleaf, shows the unprecedented growth in both supplier numbers and non-Big Six market share over the last four years. In testimony to this growth it is notable that the independent suppliers now hold more domestic customers collectively than three of the Big Six do individually.

¹³ Suppliers are mandated to install smart meters by the end of 2020. The Smart Metering Equipment Technical Standards (SMETS) defines the current version of the metering technology to be installed.

¹⁴ <https://www.ofgem.gov.uk/publications-and-updates/switches-nearly-30-millions-go-energy-shopping>

Figure 2.3: Growth of independent suppliers



We suggest there are several reasons why the energy supply market has changed so significantly since the turn of the decade:

- Firstly, we observe that wholesale markets have been relatively benign following the economic crash of 2008 (although they have been on an upward trend since autumn 2016). This has allowed new entrants to take advantage of generally falling wholesale prices by passing them onto customers more quickly than the established players that tend to purchase wholesale products for delivery further into the future, and hence experience a lag between costs and altering retail prices in response. It also lowered the credit costs faced, and reduced the risks related to not trading in the wholesale market. Recent volatility in the wholesale market may have reduced this benefit for new entrant suppliers
- Secondly, the sector has been under continual political and media scrutiny since retail prices rapidly increased in 2008. As a consequence, the Big Six have been cast as offering expensive products and poor service, although we note that other less well-known suppliers could also be said to exhibit similar behaviour. This has allowed newer players to capitalise on the low (although now improving) perceptions of the established players. While it is true that the Big Six have been responsible for significant customer service failings over the years, the scale of these problems are proportionate to their large customer bases and complaints league tables frequently show Big Six suppliers vary as much as independents.¹⁵ Similarly, their higher prices are explainable by more conservative hedging strategies that have insulated customers from both rising and falling wholesale prices. Now wholesale prices are rising again we are witnessing some steep tariff rises from independents too
- Thirdly, the costs of entry have come down (despite still being substantial) as IT system provider competition has increased
- Finally, there are several costs that new entrants to the household market can avoid that are related to the delivery of energy efficiency and social programmes that only become an obligation once account numbers exceed 250,000 (although it is notable that suppliers who have crossed these thresholds have

¹⁵ <https://www.citizensadvice.org.uk/about-us/how-citizens-advice-works/media/press-releases/extra-energy-records-worst-ever-score-in-complaints-league-table/>

continued to grow). That said, several more socially-minded suppliers have chosen to voluntarily participate in the Warm Homes Discount scheme which is a relatively low-cost (to the supplier) programme to join. There is no mechanism for smaller suppliers to participate in the Energy Company Obligation, although they can contract with third parties to deliver energy efficiency measures (although we are not aware of any smaller suppliers doing this)

2.2.1 The re-municipalisation of energy

A more recent trend has been the growing interest from local authorities to take a more active role in the energy markets. The reasons behind this are manifold but basically boil down to looking at commercial structures to offer tailored energy tariffs to support local residents and businesses; as a means to facilitate development of and extract value from local low-carbon generation; and potentially seeking an additional revenue stream as central government grant funding is removed. The primary models adopted to date include fully licensed supply (e.g. Bristol Energy, Robin Hood), traditional white label supply (e.g. Peterborough, Cheshire East etc.), an emerging move towards 'white label plus' (White Rose Energy) and the development of private wire/ network solutions often incorporating heat networks.

The unique selling point for these suppliers has been their reputation and familiarity to customers. Rather than trying to attract particularly savvy customers with highly competitive offerings, their strength is that they have the potential to attract disengaged customers who are otherwise reluctant to switch and will view the council as a more safe and recognisable pair of hands. Local suppliers often do not seek to be the cheapest on the market, but price products that will still save the disengaged and vulnerable customer segments significant amounts compared with their incumbent supplier. For example, Bristol Energy stated on its website that 'We save our customers on average around £200 per year on average on their energy bills¹⁶'; although it gives no explanation of exactly how it has derived this figure.

While it is difficult to determine the exact customer numbers that these offerings have acquired we have noted below public announcements regarding customer numbers and the estimated date of market entry to provide a view on the potential growth rates.

Figure 2.3: Authority supplier customer numbers

Company	Supply model	Estimated market entry date	Last stated customer numbers	Date of statement
Peterborough Energy	White label supply	April 2015	5,000	September 2016
Southend Energy	White label supply	June 2015	3,000	March 2016
Fairerpower	White label supply	March 2015	7,000	November 2016
Robin Hood Energy	Fully licensed supply	October 2015	50,000	October 2016
Bristol Energy	Fully licensed supply	February 2016	46,544 (meter points)	December 2016

Bristol Energy, the fully licensed supplier operated by Bristol City Council, launched in early 2016. In a presentation in July 2016 it stated that it had around 10,000 customers and that it saw a three-fold increase in

¹⁶ <https://bristol-energy.co.uk/media-center/our-quarterly-updates>

its customer base month-by-month for the first two months of operation. Latest industry supply volume data suggests in excess of two-thirds of Bristol Energy customers are outside of the immediate Bristol area.

This suggests that it is possible for public authority-backed suppliers to experience relatively rapid growth.

We are also aware that Robin Hood's business model and growth plans are closely linked to the company offering white-label services to other Councils, such as evidenced by the recent launch of White Rose¹⁷ energy, a white-label of Leeds City Council. As a result of this focus Robin Hood Energy has been key in the development of the white label plus model of supply and in engaging with interested councils regarding the options. In October 2016, Robin Hood said that it had reached just shy of 50,000 customers.¹⁸

More detail on the current landscape, and the region in and around London, is presented at section 3 of this report.

While it is of course preferable for an energy supply company to be profitable, a supply company entity that is only marginally commercially viable in and of itself can still provide an overall net benefit to London if it allows the GLA to deliver wider social, environmental, and economic benefits.

2.3 Regulatory and policy risk

The energy sector in GB is subject to rapid change as new technologies develop and policy goals change. Regulation necessarily must change rapidly in response to this, which has at times led to considerable uncertainty within the sector. There are several areas that are currently evolving or serve as important cautionary tales as to how swiftly the policy and regulatory environment can become far less hospitable for certain business models.

Principles-based regulation

Principles-based regulation (PBR) is Ofgem's current effort to overhaul the system of regulation to make it more responsive to the changes facing the industry. By becoming less prescriptive, Ofgem hopes to considerably simplify the supply licence and promote a healthier environment for innovation and customer protection. Particularly, broad principles such as "treating customers fairly" – while somewhat open to interpretation – should encourage suppliers to ensure their decisions conform with the spirit of the law, rather than just the letter. At the same time, cutting down on prescription should avoid unnecessary restrictions on emerging technologies and business models.

Faster switching

The Switching Programme is an Ofgem-led initiative to reform the GB switching system to make it faster and more reliable to improve the customer experience. The regulator has issued a Request for Information as to the costs and benefits of different reform packages it has proposed, and will undertake an impact assessment with a view to reaching a decision by the end of the year. The three packages are:

- Reform package 1 – which would retain the existing systems architecture but look to shorten the switching time to between three and seven calendar days. This would be achieved through optimisation, improving the data reliability, and shortening the objections window to one working day
- Reform package 2 – a single central switching service (CSS) would be created to harmonise the gas and electricity switching processes. Gas suppliers would gain responsibility for initiating switches and

¹⁷ <https://www.whiteroseenergy.co.uk/>

¹⁸ <http://environmentjournal.online/articles/robin-hood-energy-one-year/>

objections would be via an automated mechanism. This is expected to shorten switching timescales to one calendar day

- Reform package 3 – in addition to the package 2 changes, the separate gas and electricity enquiry services would be superseded by, or made accessible through a single market intelligence service (MIS). Again, switching timescales of one calendar day are expected

It is likely that package 2 or 3 will be selected, with either resulting in costs to suppliers for the creation of the CSS, and potentially for the MIS too. Suppliers will also have to cope with changes to the objections window for customers who are switching, and to the Cooling Off period for those who have switched.

Embedded benefits

“Embedded benefits” is a term given to payments received by or costs avoided by some generators connected to the distribution rather than transmission networks. These are a result of features of the charging regime and there have been persistent concerns that they over-compensate these “embedded” generators for the benefits they bring to the system. It is thought that this is having a distortionary effect on the market, incentivising the deployment of inefficient small-scale diesel generators rather than cleaner, more efficient large-scale power stations. As a result, the regulator has decided to undertake a Targeted Charging Review¹⁹ into the benefits and is considering implementing reforms that would substantially reduce the primary embedded benefit (by around 95%). These changes could considerably upset the business plans of several generators and the suppliers who contract with them, and are a prime example of how disruptive business models can be threatened by sudden regulatory change.

Price caps

The return of price caps to the energy market has been a controversial subject and we are now seeing the application of one for the first time in GB since retail market opening. As a result of the Competition and Markets Authority’s (CMA’s) energy market investigation, it directed Ofgem to impose a price cap²⁰ on domestic customers with non-smart prepayment meters to protect them from the fact that they typically have less scope to switch and benefit from savings. Running from 1 April 2017 to 31 December 2020 (by which time all customers ought to have smart meters and hence new opportunities for savings), this will be updated every six months, but has been started at a level approximate to the average direct debit standard variable tariff (SVT) of the eight largest suppliers of prepayment customers.

Further to this, on 16 March Conservative MP John Penrose called for the introduction of a cap on all Standard Variable Tariffs (SVTs)²¹ with the support of several non-Big Six energy suppliers. It was considered that this might at least see the CMA’s prepayment price cap extended to all customers in receipt of the Warm Home Discount. Both of these points are significant for the GLA: firstly, from a regulatory and policy point of view they indicate that there is scope for considerable intervention in the market; secondly, there is a risk to the GLA and other local authorities moving into the energy sector that the reduction of bills for less well-off households through regulation may reduce the scope to appeal to ‘sticky’ customers if they benefit from greater protection.

¹⁹ <https://www.ofgem.gov.uk/publications-and-updates/targeted-charging-review-consultation>

²⁰ <https://www.ofgem.gov.uk/publications-and-updates/ofgem-sets-prepayment-price-cap-protect-over-four-million-households-least-able-benefit-competition>

²¹ <https://hansard.parliament.uk/Commons/2017-03-16/debates/7CC66DFA-2826-445A-87AE-0FD79CDBD975/EnergyPrices>



2.3.1 Commentary on regulatory risk

As shown above there has been a significant increase in regulatory risk in the recent months. Looking forwards we expect this risk to further increase, with the potential for wider price caps, further changes to network charging regimes and the move to more volatile imbalance prices. This, combined with the recent fluctuations in wholesale price mean that it is, in our opinion, now a substantially less benign market to enter than when the two current local authority fully licensed suppliers did so.

This change in market circumstances should be remembered when considering which market entry model to pursue. It may be prudent to enter the market initially in a more controlled manner through White Label supply, with the lower investment costs and market exposure. If EfL is successful then this could later be leveraged as a base to move to fully licensed supply, rather than committing significant sums up front to enter in this manner.

2.4 White Label Plus

This option involves contracting with an existing licensed supplier, enabling EfL to provide branded and tailored energy tariffs (electricity, gas, and dual fuel) to residential customers. It differs from a standard White Label arrangement in that the white label supplier is more involved in the customer management, including potentially handling in-house a wider range of activities and receiving a longer-term income stream from the arrangement. The expectation is that the arrangements also provide greater benefits to white label customers in terms of price guarantees.

2.4.1 Introduction

“White Label Plus” is the name given to a recent phenomenon in the energy retail market and as such has not yet been clearly defined. It is a designation given to a range of options offered by some suppliers at the moment that go beyond the traditional white label supply partnership approach.

It is important to note that there have been no new regulatory or licensing changes that have given rise to these approaches; they are the result of fully-licensed energy suppliers (initially those established by local authorities, but we are now seeing a wider range of parties willing to offer these arrangements) seeking to offer terms to other entities that are more attractive than those offered by traditional suppliers. In regulatory terms they are no different from traditional white label partnerships, but potential for additional responsibilities for the white label supplier means that they are likely to be more complicated both contractually and operationally.

The only firm White Label Plus agreement about which there is good visibility has been that between Robin Hood Energy and Leeds City Council’s White Rose Energy. White Rose has announced that Robin Hood will be required to offer fair and affordable tariffs at the outset and on an ongoing basis, checked against a price comparison website, and it is known that it will be receiving an annual retention payment for each customer. Additionally, White Rose has stated its aim is to particularly help the pre-payment market to combat fuel poverty in the form of cheaper deals and a push for the installation of smart pay-as-you-go meters in Leeds City Council’s social housing properties.

2.4.2 Defining the option

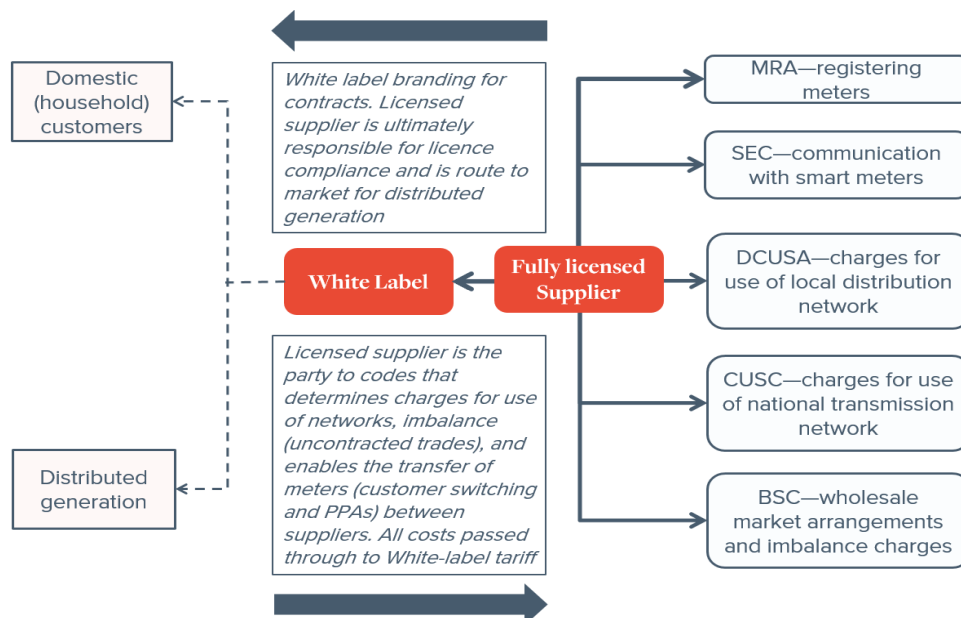
Traditional white label partnerships have been adopted by several local authorities—typically those of a smaller size—across Great Britain, but are often not a particularly attractive option, particularly for larger or more ambitious councils. They are most valuable for organisations seeking to enter the market who are resource-limited and wish to avoid exposure to risks within wholesale markets and the central trading arrangements but still develop a unique brand, suitable to local needs. However, they primarily represent a route to market for an established supplier. To date white label arrangements have been little more than sales commission-splitting arrangements with local authorities for using their relationships and brands with local householders to help the established supplier acquire customers. There can still be consumer benefits from this arrangement, but they are likely to be significantly lower than through other routes to market.

Although poorly defined, White Label Plus is generally understood to be an arrangement that follows the same contractual design as white label supply, with additional potential activities carried out by the white label and greater opportunities, there is no set offering of which we are aware. Therefore, for the purpose of this report we have used the below definition of white label plus supply. This is based upon the offerings we have seen develop in the market and our broader understanding of what this arrangement looks to achieve.

We would expect a White Label Plus arrangement to potentially offer:

- Annual retention payments for each customer to ensure a steady ongoing revenue stream (whether in addition to or in place of an acquisition fee)
- A degree of flexibility in the tariffs it offers, both in structure and level
- Involvement in the smart meter rollout – and from previous announcements prioritisation of the rollout of smart meters to prepayment meter customers
- Potential to bring additional activities in-house, such as call centres and some billing activities. We recognise that the GLA itself does not currently run these services, but it may be an activity that a London Borough could offer or something that EFL could look to in-house later if it wants to become a more ‘hands-on’ supplier
- Potential flexibility for contracting arrangements, whether with local generation or wholesale trading arrangements

Figure 2.4: White Label supply—regulatory relationships



White label service provision is discretionary and as such there are no standardised commercial agreements in the market. Typically though, there will be a contractual relationship ensuring that the fully licensed supplier offering the service is indemnified from white label activity that may cause it to breach licence conditions. While it is normal for a white label to receive acquisition payments for each customer from the supplier, not all of them receive annual retention payments, so the inclusion of this within White Rose’s arrangement is noteworthy.

There will also be stringent rules relating to the use of the white label brand, a payment structure typically based on the number of contracts the white label secures through its sales and marketing activity, and a small degree of flexibility regarding tariff pricing for consumers. This could take the form of the fully licensed supplier committing to signing power purchase agreements (PPAs) with them and sharing cost savings (when compared to the conventional wholesale market) between the generator and white label customers. Regarding length of contract and break clauses, it is our understanding that a fully licensed supplier would normally seek a minimum of five years’ commitment from the white label, with the potential for an extension clause of up to ten years. Depending on the partner involved and the exact contract negotiated some agreements may require the white label to secure a minimum number of customers within the contract

period. Based on discussions with different parties offering white label arrangements we understand this varies by offering and so should form part of EFL's negotiations if it proceeds with this route.

While the exact terms of the arrangements between white label suppliers and their partner supplier are commercially sensitive, based on what we understand White Rose Energy has negotiated with Robin Hood, it is likely to be inclined to offer more favourable terms to a fellow authority than other suppliers would. This might include the ability to offer a discounted local tariff and additional value added services such as energy efficiency and smart metering. As a result, it is possible that by partnering with such firms EFL might be able to become a white label supplier with a much stronger position than could otherwise be the case.

Given the nature of the arrangement between two local authorities, we understand that there is a greater appetite for longer term agreements between the parties, potentially lessening the major risk of contract end/failure from white label supply. This model also proposes to deliver greater social benefits to the white label customers, with the installation of smart prepayment meters at authority-owned social houses, which also suggests there may be an opportunity for a voiding arrangement under this model. We recognise that for the GLA this would require the cooperation of the London Boroughs or Housing Associations, as the owners of the social housing stock. However, we consider that this would likely to be forthcoming, given the benefits to tenants and the voiding payments typically provided under these arrangements. From statements about White Rose Energy working with social housing, we infer that this is the case for this supplier.

2.4.3 Current status of white label partnerships in the market

Several partnering approaches exist in the market today, but few long-term relationships have developed. The fully-licensed local authority suppliers are a different story however. To date we have seen a number of local authorities announce that they will be proceeding with white label supply under this model, including Leeds City Council, Islington Council, and Liverpool City Council²², all with Robin Hood Energy. Liverpool City Council has not been as clear as Leeds City Council regarding its white label arrangements I, but it has confirmed these involve provisions to replace prepayment meters with smart meters and so are presumably similar. We are also aware that several other councils are in discussions with Robin Hood Energy about potentially using this model. It is known that Leicester City and Leicestershire County Councils are jointly pursuing the creation of an energy company and have chosen a partner, but its identity has not yet been confirmed.²³

The most long-established and successful white labels in GB (based on customer numbers) are the partnership of British Gas with Sainsbury's²⁴ and the SSE arrangement with Marks and Spencer²⁵.

Some white labels choose to take a more involved approach than others and outsource less of the work to their partner supplier, for example Ebico and Glide. Both are good examples of how white labels can differentiate themselves within the scope of their partnerships.

Until recently there was little insight as to how these council-backed companies were structuring white label proposals, but White Rose has announced that Robin Hood will be required to offer fair and affordable tariffs at the outset and on an ongoing basis, checked against a price comparison website. Additionally, White Rose has stated its aim is to combat fuel poverty in the form of cheaper deals for the prepayment market and a push for the installation of smart pay-as-you-go meters in Leeds City Council's social housing properties.

²² <http://www.liverpoolexpress.co.uk/energy-supplier-to-be-appointed/>

²³ <http://www.leicester.gov.uk/news/news-story-details/?nid=89087>

²⁴ <http://www.sainsburysenergy.com/>

²⁵ <https://www.mandsenergy.com/>

As noted in section 2.2.1, Robin Hood Energy are offering white label services to other local authorities, and Bristol Energy has made clear statements that it intends to offer these services, although we understand it is not yet doing so. ENGIE is also known to be interested in offering more attractive white label partnerships.

We recommend that the GLA considers the potential to offer a similar white label service to other local authorities if it does proceed with fully licensed supply. This would allow it to generate additional revenues and spread its fixed costs over a larger demand base. This could be particularly valuable if EfL was able to supply other councils' own estates to help offset the relatively small size of its own estate usage. However, in this space it would likely need to be able to demonstrate that it could offer something additional to Robin Hood's current offering, given its experience and first mover advantage in this space.

2.4.4 Required legal and regulatory considerations

As noted above, the white label is itself not directly bound by the supply licence, but may want to establish a special purpose vehicle to ring fence its activities from core business activity. As the white label does not itself trade and—in its simplest form—is in effect a marketing entity that accrues revenue for each customer that switches to the brand, the commercial structure would be relatively simple. That said, legal advice would still be required to ensure EfL does not fall foul of any rules concerning public sector entities acting in a commercial capacity.

The other key legal requirements would be in relation to the contract between the white label and the fully licensed supplier. The white label would need to fully understand any risks associated with its activity that breach the fully licensed supplier's licence conditions, and the consequences of this. Further considerations include break clauses, determination of marketing materials/ branding, routes to communicate between the parties (e.g. notifying sales, customer contact routes, financial flows, etc.), and mechanisms for notifying to the white label and customers of any price changes.

2.4.5 Overview of financial business models

As a result of the minimal regulatory obligations under this model and handling of the majority of tasks by the partner supplier, the primary set-up costs for white label supply concern negotiating and agreeing terms with the potential fully-licensed supplier partners. The main ongoing costs will be centred around customer acquisition from the staff involved and direct marketing costs. We have treated these as ongoing, rather than set-up costs, as they will remain as the white label continues operations in further years. Given the nature of white label supply as a contract between the fully licensed supplier and the authority, each agreement is bespoke between the two parties. OVO Communities developed a package specifically aimed at local authorities to facilitate the establishment of white label offerings; however, we understand that even these involved a degree of uniqueness for each agreement.

Partnering approaches have merit over a do-nothing approach given the stated objectives of the GLA and will enable the capture of a modest revenue stream, which are expected to over time outweigh set up costs. This assertion though is dependent on the terms of the contract agreed with the fully licensed supplier, as it is our understanding that some of the arrangements require the white label to make an upfront payment to cover the costs of developing appropriate and compliant marketing materials. If projected customer acquisition numbers are below expectations the white label supplier may not recover its initial outlay as quickly (if at all) as expected.

Contract negotiation costs are a factor of time, necessary procurement obligations faced by public authorities, the exact split of responsibilities between the parties, and the willingness of the fully licensed supplier to engage. There are three main parties who we would anticipate being involved in the contract negotiation process. These are:

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- Senior management from both the GLA and the licensed supplier – these will be needed to conduct the actual negotiations and agree the contract
- Legal support – given that the majority of actions are undertaken by the fully licensed supplier the legal support required for contract negotiation should be relatively minimal, and focused on the agreed sales and marketing activity (e.g. expected behaviours, training, and monitoring of white label sales agents), payment terms, end customer tariff prices, and general contract terms
- Energy advisors – to provide support to the GLA to interpret the tariffs and hedging strategy used by the fully licensed supplier so that it has a solid understanding of the drivers behind the tariffs and costs it will be offering to customers under its own brand. Additionally, they would be needed to provide an overall ‘sanity check’ of the proposed arrangement to ensure that no unidentified issues remained

The exact length of time and resource needed for contract negotiation varies in each case due to the unique nature of white label supply arrangements. This means that it is difficult to provide exact resource estimates for the project.

While it is technically possible to undertake white label supply in the business sector, white labels are much more common in the residential supply market. Based on our research, we estimate that there are slightly over 1mn residential customer accounts currently supplied through white label arrangements; the majority of these are accounted for by the Sainsbury’s (British Gas) and Marks and Spencer’s (SSE) offers. Given this, the potential complications around non-domestic supply with the licence lite supplier, and the focus on fuel poverty we recommend that the GLA focus on domestic white label supply.

There are no collateral requirements, although the fully licensed supplier may seek a commitment for the white label to guarantee a number of customers during the life of the contract and/ or cover any costs associated with producing compliant marketing and sales materials.

Operating costs

For operational costs we have focused on the ongoing staff costs and the marketing and customer acquisition costs that the white label supplier would face.

We have presented two figures for these costs, the initial ‘at launch’ costs to represent the staff required to begin operation of the company, and those at 15-30,000 domestic customers²⁶.

Figure 2.5: White label salary costs

Period	Salary costs (£)	Other costs (£)	Total operating costs (£)
At launch	75,000	25,000	100,000
15,000-30,000 domestic customers	150,000	50,000	200,000

On the assumption that the white label bears the cost of marketing and sales, these would have to be factored into ongoing operational costs. The fully licensed supplier would seek through contract assurance that sales and activity complied with the stringent licence conditions governing the activity. Traditionally these budgets have been fairly low for white label suppliers as income is linked to customer numbers not margin. However, as under white label plus supply there would be an ongoing payment and a broader aim to establish a more ‘standard’ supplier customer base we would expect to see a larger spend in this area.

²⁶ This figure has been chosen as it is roughly equivalent to the consumption of 50-100GWh of electricity demand (which we consider to be the likely breakeven point of standard supply)



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The exact marketing spend will depend on EFL's growth ambitions. However, based on a typical growth plan of 50,000 customers/year we predict a spend of £175,000 to £300,000. This will vary depending on the acquisition route that EFL wishes to focus on, but we have assumed a mix of face to face, online switches, and telesales.

Total costs

We estimate the total entry costs of white label supply, include the set-up costs and 'at launch' staff requirements to be in the **range of £490,000 to £825,000**. In addition to this we would recommend the inclusion of a 10% contingency fund in this cost when estimating the cost of supply to ensure successful delivery.

Revenue

Typically, under these arrangements the white label supplier receives an acquisition payment from the licensed supplier partner upon signing up the customer for supply. We also understand that several white labels have negotiated to instead receive retention payments for customers who remain with them after the initial sign-up period has passed, which provides the opportunity for an ongoing revenue stream. Ebico, which as the longest-running white label has been operating over 15 years, had a similar arrangement with SSE and presumably will with Robin Hood (its former and current licensed supplier partners).

2.4.6 Process for putting in place necessary arrangements

This route to market has the lowest set-up costs of the models under consideration. As a white label supplier EFL would not need to invest in any of the industry-facing systems or a large staff base. Instead, negotiating and agreeing terms with potential partner suppliers, and possibly the purchasing of a simple Customer Relationship Management (CRM) system to support marketing activity represent the main costs.

The IT systems required from the white label's perspective are relatively straightforward and low cost compared to other routes to market. All the complex industry-facing requirements are carried out by the licensed supplier, such as meter registration, billing, and wholesale trading. As a white label supplier, EFL would face no requirement for industry code-facing systems or a full CRM system, but would require systems to manage the marketing flows and integrate with the partner supplier's CRM. It should be noted that the exact IT requirements would be determined by the contract with the fully licensed supplier and it may be the case that the white label has no/ little cost as it will simply notify the fully licensed supplier partner of new sales leads via a manual process (e.g. spreadsheet/ email). At the other end of the scale the white label supplier may opt for a 'thicker' model (akin to Glide) where much of the day to day customer interface is undertaken by the white label supplier.

Much of the implementation timeline will be focused on the identification of a suitable partner for the white label supplier. However, from discussions with parties offering white label plus arrangements we understand that once financial close has been achieved it should be possible to launch a white label plus supplier within 3 months.

2.4.7 White Label partnerships and power procurement

Becoming a white label supplier does not necessarily offer any particular means to procure power or bring associated generation to the market. As white labels typically act as only acquisition and retention agents for their partner licensed supplier, they are normally not involved in the procurement of power or contracting with generators.

However, under the OVO Communities schemes, white label suppliers can contract with some local generators in the form of standard PPAs. This still means that most the benefits accruing to the licensed



supplier rather than either the generator or the authority partner, but it is not to be dismissed and should definitely be a key element of white label plus negotiations. The fully-licensed local authority suppliers have publicly indicated their willingness to work with other local authorities via “thicker” white label arrangements that may include possibilities such as contracting with local generation. We are aware that some parties such as have proposed the potential for ‘community’ PPA’s from local supply companies, where local generators are paid above market rate to fund local renewable deployment. This is allowed under market rules, however, we are not aware of any supplier offering under market payments due to the need to be non-loss making and maintain competitiveness with other suppliers.

2.4.8 Ability to transition to fully licensed supply

A frequent topic considered by companies planning to enter the energy market as white labels is the scope for later progressing to fully-licensed supply. Operating as a white label would allow the GLA to test the appetite for a public authority-backed energy company in London, build up brand recognition, and gain experience of running an energy supplier. However, the transition to a fully licensed supplier is not without risk. Since customers in a white label partnership belong to the fully licensed supplier, the white label would have to hope that its customers would choose to follow it after splitting from its partner. We understand that some models are challenging this by claiming that they would allow the authority to own the customers. We question the validity of this as under industry rules as the customers’ meter would still need to be registered to the fully licensed supplier. Instead we believe this would be handled via a contractual arrangement to allow the white label supplier first right to market to the customer to persuade them follow the white label to the new licence (as the customer will still need to make the conscious decision to switch). We believe this is in line with the arrangement Ebico had with the move to Robin Hood Energy. Additionally it is unlikely that this route would result in significant system savings. This is because the additional complexities of licensed supply mean the white label CRM is unlikely to be suitable for running a full supply business.

To date, Cornwall is aware of two domestic suppliers who have moved from white label partnerships to fully-licensed supply: LoCO2 Energy (now known as Solarplicity) and Green Energy, who both partnered with Opus Energy.

It is also worth noting that, during its switch from partnering with SSE to Robin Hood, Ebico had the opportunity to inform its customers that unless they switched to a new tariff with it they would be transferred to SSE. Were a white label plus EfL to obtain a supply licence at a later date, it is likely to have a significant opportunity to market to its customers that they would have to actively switch to its new business, or else default to EfL’s white label plus partner.

Ultimately, going from being a white label to a licensed supplier is similar to setting up as a licensed supplier from scratch, only with the likely (but not guaranteed) advantage of high brand awareness and trust amongst the target customer market, and the potential to retain a reasonable proportion of its initial customer base, subject to negotiation with the partner supplier and maintaining a sufficiently attractive offer.

2.4.9 Partner-related risk

While the risks faced by fully-licensed supply are largely those inherent in any commercial endeavour—reputational, financial, and regulatory—white label supply also carries a distinct type of exposure that comes from relying on a partner. As recognised above, the white label does not have customers *per se*, and so the collapse of the fully-licensed partner supplier or the agreement between it and the white label is a significant threat. Additionally, if it does not have its own distinct tariffs and the partner raises its prices, the white label will be forced to follow suit and may suffer as a result. It is notable that Robin Hood has recently raised its

standard tariff by 17% in response to rising wholesale prices,²⁷ and White Rose Energy followed suit.²⁸ This reflects one of the key risks from white label supply: the lack of control over prices. However, it should be born in mind that Robin Hood's price increase comes amid a general increase in prices across the market due to the increases in wholesale and particularly third party costs. A fully licensed supplier has greater latitude to accommodate when and how market costs are reflected in tariffs.

Suppliers failing financially is an unusual occurrence but the collapse of GB Energy Supply in November 2016 illustrates that this is a risk, albeit this was the first domestic supplier exiting the market since 2002. However, it is clearly a risk to consider and recent rising wholesale prices have raised concerns that some of the other smaller, newer entrants may not be so resilient. GB Energy Supply is also an interesting example as it had a white label in Hebrides Energy. Run by Comhairle nan Eilean Siar (the Western Isles Council), Hebrides Energy lost its customers to Co-op Energy when that supplier was selected as the supplier of last resort by Ofgem and Hebrides Energy has made public statements about seeking a new licensed partner is now having to seek a new fully-licensed partner²⁹.

It is therefore very important that a white label EfL ensures that it can find a partner it can trust to have financial stability and a consistent agenda that is aligned with EfL's interests. The ability to set unique tariffs will therefore be a critical part of a white label plus arrangement.

2.4.10 SWOT analysis for White Label Plus

The table below summarises the Strengths, Weaknesses, Opportunities, and Threats (SWOT) of a White Label Plus approach, assuming that, at a minimum, retention payments, bespoke tariffs, and installation of smart meters for prepayment customers can be secured.

Strength	<ul style="list-style-type: none"> • Low overall cost • Low administrative burden • Compliance risks borne by partner supplier • Market and trading risks borne by partner supplier • Rapid market entry • Lower loan/ capital cost risk
Weakness	<ul style="list-style-type: none"> • Lower levels of revenue accrued • No "ownership" of customers as they belong to the partner supplier, meaning they may be lost if EfL's contract with the partner ends • Limited scope for capturing and reinvesting local energy spend under retention payments • Low potential for innovation and adaptability in the face of industry or market change • Exposure to reputational risk from actions of partner supplier's actions

²⁷ <https://robinhoodenergy.co.uk/pricing-statement>

²⁸ <https://www.whiteroseenergy.co.uk/home-energy/price-changes>

²⁹ <https://www.pressandjournal.co.uk/fp/news/islands/western-isles/1174491/plans-resurrected-for-cheaper-electricity-scheme-in-the-western-isles/>

	<ul style="list-style-type: none"> Uncertain process at end of contract with partner supplier—e.g. no certainty of renewal, alternative partner provider
Opportunity	<ul style="list-style-type: none"> Opportunity to provide local tariff/ contracts to help local residents/ businesses with more suitable products where a “sympathetic” licensed supplier partner can provide reasonable terms on an ongoing basis Chance to deliver smart meters to customers – particularly prepayment customers – with support of partner Chance to engage customers around energy efficiency and promote local energy efficiency schemes Use white label to build up brand and experience with a view to moving to licensed supply Potential to negotiate PPAs to support local generation Potential to secure ECO and WHD support from participating third party supplier
Threat	<ul style="list-style-type: none"> Partner supplier cannot be found/ does not deliver under contract Partner supplier breaches compliance requirements, exposing EfL to reputational or financial risk Long term viability of the model in question, as it relies on the continuing appetite of the partner supplier and/or others in the market after initial contract period Other local authorities begin selling power within GLA area; Islington has already begun negotiations to do this Competition from incumbents, particularly regional suppliers Partner supplier not being a mandatory WHD/ECO participant and does not wish to be so voluntarily Customer uptake below expectation, exposing GLA to financial/reputational risk Regulatory and policy framework changes that puts model at risk Poor execution of implementation plan

The main advantage of taking a White Label plus approach is that it is a relatively **cheap, simple** option. Because most work is achieved by the fully-licensed partner, a White Label plus supplier can be set up quite cheaply and run by a small team. For the same reason, it is mostly up to the partner to ensure customers are treated fairly, that white label marketing materials are compliant with regulations, and to conduct energy trading. It is therefore also the **lowest-risk** option in many ways. It is also **much faster** to set up than fully-licensed supply, with market entry timescales measured in months rather than years.

White Label Plus arrangements can be expected to allow EfL to **offer local tariffs**, arrange value-added services like **targeted smart meter installation**, and secure a **modest ongoing revenue stream**. The exact nature of the service offered will depend on the contract terms negotiated with the partner, so additional arrangements are possible. Such terms may include a guarantee of a **competitive tariff on an enduring basis**. White label supply could also be used as a valuable **stepping stone** to licensed supply, testing the local appetite for a Council-backed supplier and establishing brand awareness.

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However, this low cost is counterbalanced by **relatively low potential revenue**. As a white label, EfL would have **no direct contractual relationship** with customers so the full customer revenue would pass to the partner supplier, with EfL only receiving acquisition/ retention payments.

Having a fully-licensed partner do most of the heavy lifting offers many advantages, but it is also the biggest drawback. If the partner does not **deliver under contract terms** or will not **renew the contract** on expiry, EfL would then have to find another partner or face having to simply **cease trading**, as all “its” customers belong to the partner, and it cannot operate on its own. Finally, while white label supply will allow EfL to test its brand, few of the systems and processes are likely to be **transferable to licensed supply**, and **existing white label customers** cannot be forcibly switched to EfL once it is licensed, although there would be the potential to market to them to encourage them to make the switch. We also note that to date **two suppliers** have made the **transition from white label supply to fully licensed supply**, Green Energy and LoCo₂ Energy.

Based on this SWOT analysis it is our **initial conclusion that white label plus would be a potentially suitable option for the GLA** to enter the energy market. This is primarily driven by the short set-up timescales, low entry costs, and ongoing retention payments. A final and fully reasoned conclusion based on the local market assessment will be provided in Section 4.

2.5 Fully Licensed Supply

Becoming a fully licensed supplier is the conventional route to market for new entrant suppliers. In this case, EfL would have the ultimate responsibility to comply with the industry codes and customer-facing obligations set out in the licence. To varying degrees though the more arcane areas of supply can be (and regularly are) outsourced to third parties. The option may be more complicated and expensive than White Label Plus, but it is more flexible and grants EfL full independence and the most effective route to influencing the local energy market and achieving wider social, economic and environmental outcomes over the long term.

2.5.1 Defining the option

Becoming a fully licensed supplier of both gas and electricity to households and businesses (including the GLA's own estate) represents the "deepest" option in terms of taking a fully active presence in the energy retail markets. Under this approach all compliance requirements would sit with EfL, as does the control over how the entity contracts with industry third parties (e.g. metering providers, wholesale counterparties, system providers etc.) and the products and services it offers to end consumers and local generators.

It should also be noted that a holder of a supply licence is required to sell energy across GB—there is currently no "local" licence.

2.5.2 Current status of fully licensed supply in the market

Fully licensed supply is the conventional approach for energy companies entering the market. Of particular relevance to the GLA's aims are Bristol Energy and Robin Hood Energy, as discussed in Sections 2.2 and 2.3. Both have been created by local authorities and become operational in recent years. A number of Bristol Energy's customers are outside the Bristol area, and the company has responded to this with the launch of a My Bristol tariff exclusively for customers with a Bristol postcode.

In our assessment, Bristol Energy and Robin Hood Energy are performing well in terms of customer acquisition, having only been active in the market for about 18 months. The media has implied some disappointment in the numbers they have gained, but we do not believe this to be unreasonable growth, particularly given that they have not sought to compete heavily on price.

With regard to the benefits to local residents, both Bristol and Robin Hood would doubtlessly like to have more customers, but neither is actively trying to offer the cheapest deal on the market. Both are trading on the strength of their council brands to attract "sticky", disengaged customers who may otherwise not switch at all, and would view their council as a safe pair of hands. As a result, the customers they are attracting are expected to be more likely to be those who are most in need of discounted rates and other support, providing a stronger overall benefit to people than attracting, for example, an additional 10,000 savvy, active customers who switch around every year or so and are used to low bills. This is core to the public authority energy offering, and when tied in with the additional support services that can be targeted at these customers means that the benefit to residents likely goes beyond the headline saving cost. Additionally, we are aware that one of the authority suppliers is able to offer a highly targeted social tariff that customers are recommended to by charitable partners to help those customers who are particularly vulnerable.

2.5.3 Market entry

As the most complex of the market entry options, fully licensed supply is generally the most expensive and difficult to achieve. However, because it is the most commonly-used approach there exist around it several support services provided by specialist firms to ease market entry.

The vast majority of new entrants decide to procure an off-the-shelf market entry option known colloquially as a “supplier-in-a-box” when entering as a fully licensed supplier. This is where a specialist utility IT systems vendor gains an electricity supply licence and accedes to a number of the core industry codes. This prequalified licenced company is then sold onto the new entrant and from this point forward the company assets are transferred to the new entrant and the new company can go through Controlled Market Entry (CME). This forms the final stage of accreditation and demonstrates to market administrators that the new entrant understands how to register meters and manage associated data flows. This process results in the new entrant avoiding most the accession process itself.

While the costs of purchasing a “supplier-in-a-box” are significant, it is our opinion (and borne out by experience of recent new entrants) that this option is still cheaper and less time consuming than undertaking the accreditation in-house.

As we set out below, the vendors of these services will typically look to charge an initial purchasing fee, followed by a set-up/ configuration charge, and then ongoing licensing/ service charges—usually a charge linked to customer numbers. The exact charge per customer will ultimately depend on the arrangement agreed between the supplier and system provider.

The licensing/ services provided by the systems provider differ between the different system offerings on the market, but typically include the management of the supplier’s industry dataflows and processes, data hosting, and industry interaction gateways. Many new entrants take these services at the outset as it de-risks the potential to fall into non-compliance with some of the more esoteric areas of industry codes and outsources the processing of industry dataflows into meaningful information (e.g. network company charges, customer metering problems etc.) that can be used by the new supplier.

In our opinion, supplier-in-a-box is a quicker, simpler, and lower-risk option than in-house accreditation, with reduced market entry times and less time and money spent on systems testing and accreditation.

2.5.4 Required legal and regulatory considerations

The issuance of gas and electricity supply licences results in the creation of a series of obligations that can be grouped under these main headings: licence compliance, industry code accession, and government programme obligations. All three involve, to varying degrees, initial expenditure as well as ongoing resource.

Industry Codes

The electricity licence requires accession to complex industry codes that set out responsibilities and requirements necessary to ensure the effective operation of the electricity system and functioning of the market. The central industry codes that fully licensed suppliers must accede to are shown in Figure 2.8.

Figure 2.8: Industry Codes

Code	Function
Balancing Settlement Code (BSC)	Ensures the system is balanced (e.g. supply and demand is continually met) and that electricity volumes entering and leaving the transmission system are correctly apportioned to the right party. Parties are exposed to imbalance charges for uncontracted trades.
Connection and Use of System Code (CUSC)	Sets out the commercial arrangements for parties connecting to or using the transmission system.
Distribution Code	Details the technical parameters and considerations relating to connection to, and use of, distribution networks.

Distribution Connection and Use of System Agreement (DCUSA)	Sets out the commercial arrangements for parties connecting to or using the distribution network.
Grid Code	Covers all material technical aspects relating to connections to the transmission system as well as its operation and use, and also specifies data that parties are obliged to provide to National Grid for use in the planning and operation of the transmission system.
Master Registration Agreement (MRA)	Enables the change of supplier process to function by identifying suppliers responsible for customer meters.
Smart Energy Code (SEC)	Sets out the terms for the provision of the Data Communications Company's services and specifies other provisions to govern the end-to-end management of smart metering

A large element of cost associated with establishing a fully licensed supply business is the system and expert resource requirements needed to accede to these codes (particularly the BSC and MRA) and on-going compliance under them.

Gas supply

The gas supply licence is much less onerous than its electricity counterpart as most of the functions contained in the electricity codes are undertaken via the gas shipper. Where EfL is a gas supplier and outsources the shipper function (see below) it would only accede to the Supply Point Administration Agreement (SPAA).

The SPAA governs inter-operational arrangements between domestic gas suppliers and gas distribution networks (also known as transporters) to enable the change of supplier process to function. It is a multiparty agreement between gas suppliers and the gas network companies, but unlike the MRA the accession process does not entail any qualification process.

Licensed electricity and gas suppliers that have all but the largest of consumers in their supply portfolio must also accede to the Smart Energy Code. This sets out how the Data Communications Company at the centre of the smart meter roll-out will interface with parties, how meter compliance will be assured, data protection obligations, and how registration services will be incorporated.

Licence compliance

Suppliers must put in place management, system, and operational resource necessary to fulfil comprehensive consumer protection requirements. These are more onerous where supply is made to households (but still significant for supply to businesses, especially smaller ones³⁰) and ensure consumers receive adequate customer service levels.

In terms of customer-facing activity, the gas and electricity supply licence are closely aligned. The key obligations can be summarised as:

- Gaining customers—how sales and marketing activity is conducted, including record keeping of sales activity and provision of information to consumers at the points of sales. This includes estimates of costs and principal terms of the supply contract. Suppliers to households must offer any consumer “reasonable terms” for supply; non-domestic consumers do not have to be offered terms

³⁰ The gas and electricity supply licences include additional protections for “microbusinesses”. These are defined as a company (not site) that meets at least one of the following criteria: annual electricity demand less than 100,000kWh; annual gas demand less than 293,000kWh; fewer than 10 employees (or their full-time equivalent); and an annual turnover or annual balance sheet total not exceeding €2mn.

- Supplying customers—how bills and annual statements are presented, the process for notifying “unilateral contract notifications” (price increases) and obligations related to metering including timeframes for installation of smart meters to households and smaller businesses
- Required services—dealing with queries and complaints, provision of services for vulnerable consumers, and information that must be published and made available on request
- Losing customers—rules for blocking the loss of a customer that is in debt, finalising accounts, and ultimately disconnection for non-payment/ safety

The licence also prescribes information that must be provided to consumers through a variety of channels, including the internet, telephone and on bills/ annual statements.

Gas and electricity suppliers to households and smaller businesses have a licence obligation to install smart meters that comply with the most current version of the Smart Metering Equipment Technical Specifications (SMETS). SMETS2 has recently been introduced. At present, there is no duty to install smart meters where meter replacement is required (or for new build properties). The expectation is that during the second half of 2017 the secretary of state will introduce the “new and replacement” obligation that will require all meters installed from that point onwards to be SMETS2-compliant smart meters.

Alongside the installation of the meter (and ancillary communication devices) all households will be offered an in-home display (IHD) that provides historic and real-time information on their consumption.

Suppliers outsource metering operations to qualified companies that are responsible for ensuring the assets comply with the prevailing standards. They also need to ensure that the necessary agents, as determined by industry code rules, are appointed to collect and validate meter data.

Environmental and social obligations

Further to these licence obligations, fully licensed suppliers must also comply with environmental and social programmes that are enforced through secondary legislation. Government policy requirements are summarised in Figure 2.9.

Figure 2.9: Supplier obligations

Scheme	Mandatory participation
Renewables Obligation	All electricity suppliers
FiTs - levelisation	All electricity suppliers
FiTs - participation	Electricity suppliers with over 250,000 domestic customer accounts
CfD FIT	All electricity suppliers
Capacity Market	All electricity suppliers
Energy Company Obligation (ECO)	Suppliers with over 250,000 domestic customer accounts (dual fuel counts as two accounts)
Warm Homes Discount (WHD)	Suppliers with over 250,000 domestic customer accounts (dual fuel counts as two accounts)
Climate Change Levy (CCL)	All suppliers serving non-exempt businesses

All licensed electricity suppliers have a liability under the Renewables Obligation (RO) to purchase green power and on an annual basis need to demonstrate to Ofgem that they have complied with the obligation. This can be achieved by redeeming Renewables Obligation Certificates (ROCs) that will be issued for the electricity generated by accredited renewable generators.

Electricity suppliers must also cover the costs of the scheme that subsidises the cost of the small-scale renewables technologies under the small-scale feed-in tariff (ssFiT) programme. In practice, they participate in the quarterly FiT levelisation process. This mechanism shares the cost for supporting micro-generation (<5MW) installations across suppliers based on market share. New entrant suppliers and small suppliers with fewer than 250,000 electricity customers also have the option of providing customers with FiTs³¹.

New entrant gas and electricity suppliers are presently exempt from energy efficiency (the Energy Company Obligation (ECO) and Green Deal) and social (Warm Homes Discount (WHD)) programmes operating in the household retail market. The ECO requires participating suppliers (gas and electricity) to install energy efficiency measures (typically insulation) in household for which they receive a “score”. Suppliers must demonstrate to Ofgem that they have met their obligation by the close out of the programme. The Green Deal, in its current form, has proved to be an unsuccessful attempt to introduce a ‘pay-as-you-save’ energy efficiency scheme. Electricity suppliers (above 250,000 electricity customers) collected payments from customers with a Green Deal plan to pass onwards to the installers. Smaller suppliers can opt into the scheme, but if they do not they are unable to supply customers with a Green Deal. The WHD provides annual rebates to eligible consumers to reduce the cost of their bills. In both cases, however, suppliers have the option to voluntarily participate in these schemes when they do not meet the threshold for mandatory involvement.

Gas and electricity supply made to businesses requires suppliers to collect the Climate Change Levy.

The Electricity Market Reform (EMR) work stream initiated by government in 2010 was designed to introduce new subsidy mechanisms new generation. From an electricity supplier perspective, this has introduced new obligations to fund, via consumer bills, subsidy for generators that have a contract for difference (CfD) feed-in tariff and to support payments flowing to participants in the capacity market (designed to “keep the lights on” as larger older polluting plant closes). Payments are to be invoiced daily (for the CfD) and be based on a measure of volume market share.

2.5.5 Overview of financial business models

As the most involved market entry option, fully licensed supply has the highest set-up and entry costs. In addition to the cost of a CRM system capable of delivering the necessary customer services the supplier will need an industry flow system that is capable of interfacing with the central industry systems. Due to the importance of data flows within the electricity sector these systems must meet a stringent set of requirements to be allowed to operate. Therefore, the cost of purchasing an appropriate system from a “supplier-in-a-box” vendor is significant and represents one of the main drivers of the cost difference between entering as a white label supplier and a fully licensed supplier.

The elements of setup costs can be broken down into four core areas:

- Procuring a prequalified licence and the necessary systems, including costs associated with configuration and integration between settlement and CRM system
- A CRM system capable of managing the target customer base
- Consultancy and legal support during the set-up phase, but also recruitment of permanent staff as Efl transitions to market entry and the agreeing trading agreements to purchase necessary wholesale products

³¹ Above this level suppliers must offer FiTs when asked to do so by generators.

CORNWALL

- Accessing credit and collateral, albeit this will only become “real” at the point of controlled market entry

As with the other routes to market the exact set-up costs faced will be a function of whether a fully-licensed Efl intends to supply business customers in addition to houses, and then its growth ambitions. The industry flow system costs are unlikely to vary by a significant degree between domestic and non-domestic supply as the system needs to be able to process the same flows. However, the CRM system costs will vary depending on the target market, as will the required legal and consultancy support costs.

Operating costs

While the potential setup costs needed to establish the fully licensed supplier are high, salary and other costs increase rapidly with customer growth and can quickly eclipse these costs.³²

The significant increase in salary costs compared to white labelling represents the need to provide a significant volume of in-house resource to handle customer service roles, and the highly technical roles needed for trading and dealing with the industry systems.

Sunk costs

In addition to the operating costs for the first year, the establishment of a fully licensed supplier will also incur a number of sunk costs. These include consultancy and legal advice, the GLA’s own resources used and the project delivery team needed to establish the supplier. We have provided our view on these below.

Overall costs

The overall costs for market entry as fully licensed supplier are estimated to range between **£2,375,000 - £3,125,000** (excluding working capital which will be needed for market entry) depending on the supplier’s ambition and target market. The exact costs of entry will ultimately depend on the GLA’s chosen entry strategy; however, we consider that entering as a business-only supplier with slow growth targets would likely see the lower end of this range, while entry as a household supplier will likely cost a minimum of £2.5mn. Please note that these figures do not take into account the resources utilised to undertake the scoping assessment and advance the project initially.

In the interests of prudence, we would also recommend that the GLA factors in a 10% contingency fund to prevent unexpected overspend.

The working capital requirements for a new entrant supplier are relatively low based on the timely billing of customers. To avoid a worst-case scenario the supplier might hold **£3.5mn in working cashflow** to meet any differences between revenues and external costs. Additionally, the company will need cash available to set-up the business and meet its own overheads.

But credit requirements are substantial for new entrant suppliers. They must post credit for balancing and settlement, and network charges under industry codes, with wholesale trading partners, and under renewables schemes such as the Contracts for Difference. Credit requirements for 100,000 customers could be around **~£7mn during the winter months**, including power and gas trading requirements (assuming credit requirements meeting 30 days of delivery, as per standard trading terms). Industry codes and trading arrangements allow for some provision of credit through parent company guarantees, which could equate to **around £5mn in the above example**.

However, if wholesale prices were to drop substantially, the supply business might be expected to post significantly more credit under mark to market arrangements. Trading counterparties tend to recommend that

³² The Cornwall model assumes that 1/3 of electricity and gas volumes are bought quarter ahead, with the rest month ahead.



suppliers are able to post 35% of forward contract value in the event that prices drop. This value can lead to many millions of pounds and is influenced by the length of supplier hedging as well as the volumes procured.

This is an area we recommend for development for the next stage of this project. The exact costs for this would depend on the governance structure and funding route taken, but we understand that other authority-backed suppliers have been supported by loans for the local authorities at market rates.

The costs of gas supply

The costs of becoming a gas supplier are relatively small when compared to those of establishing an electricity supplier. This is because all the industry-facing work in gas supply is conducted by gas shippers, who are the party that is required to accede to the main gas industry code (the Uniform Network Code). As EfL would already have a suitable CRM system for electricity supply, the only likely cost of entering as a gas supplier would be the licence application (£450), and a small number of additional staff to manage the gas side of supply, which includes contract interface with a gas shipper.

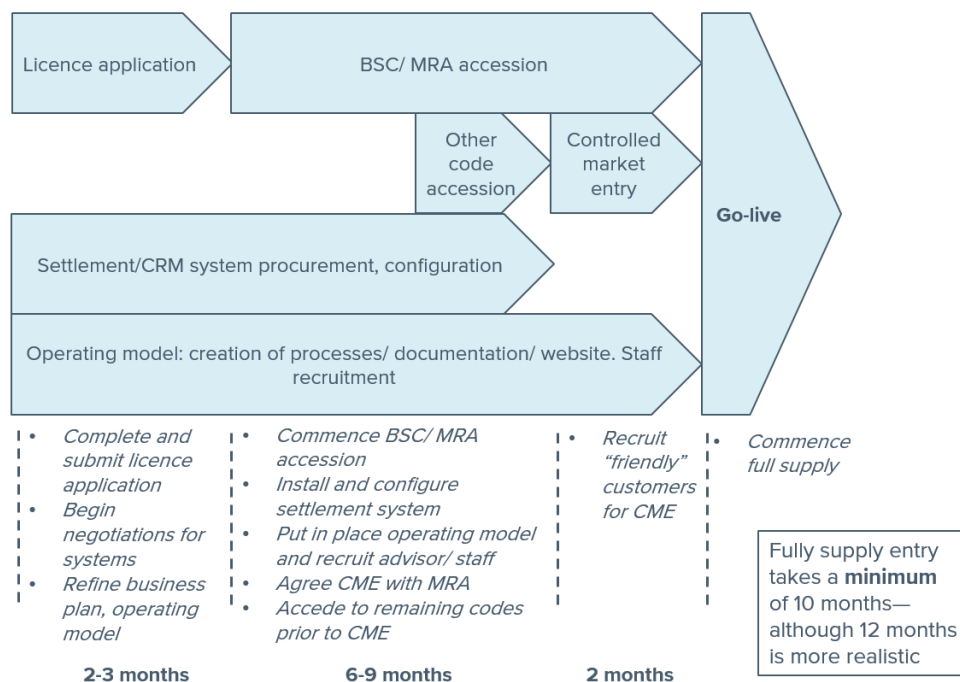
For EfL to become a shipper as well would require it to apply for a shipper licence and also accede to the Uniform Network Code, as well as obtain the necessary industry-facing systems. The advantages to becoming a shipper come in the flexibility of not being dependent on an outside party and the reduction in long-term costs due to not paying to outsource. However, it is generally the case that the cost efficiencies only emerge at the level of at least 5,000-10,000 gas customer accounts.

2.5.6 Process for putting in place necessary arrangements

As noted in section 2.5.3, the vast majority of new entrant fully licensed suppliers adopt the “supplier-in-a-box” route. We would strongly recommend this option as vendors have a track record of system accreditation and of readily adapting systems and processes to industry rule change. Vendors typically offer a depth of service that at the simplest is provision and configuration of CRM and settlement³³ systems. Many new entrants also take a managed serviced where the vendor processes and validates industry data flows.

³³ The settlement, or sometimes referred to as market messaging system, is shorthand to describe the IT and processes required of suppliers to share data with central market administrators. At a high level the processes ensure network companies can charge suppliers, imbalance charges are levied, and customer meter reading data is provided to calculate charge based on supply volumes.

Figure 2.10: Fully licensed entry steps



Prior to purchase, EfL would need to have completed an in-depth business case, undertaken market testing for all services required, and established a high-level target operating model. The latter would be used as the basis for planning the set-up, staffing, and operation of the supply entity. Within this exercise, we would expect EfL to commence plans for sales and marketing, to hone down its commercial offerings (e.g. target prepayment customers or local businesses; be "green" or low-cost, etc.), identified its premises, and settled on its corporate structure. Once the financial decision is made to establish a fully licensed supply company it could be operational within 12 months, although many new entrants take longer.

During the set-up period the following arrangements, as set out in a target operating model, would need to be put in place:

- Creation of EfL as a legal entity, including registering for VAT, appointment of directors, and setting up a bank account
- Contract with "supplier-in-a-box" vendor, including configuration of systems
- Premises, including necessary web, telephony, financial reporting systems etc.
- Trading agreement with wholesale counterparty
- Trading agreement with licensed gas shipper, which would likely include wholesale gas products in addition to shipping services
- Recruitment of an executive team
- Recruitment of permanent staff
- Sales and marketing materials and branding
- Appointment of temporary legal, market, financial advisors
- Development of internal processes
- Development of customer facing documentation

2.5.7 Fully licensed supply and power procurement

As a fully-licensed supplier, EfL would be responsible for procuring its own power on the market, and able to sign PPAs with local generation, its own associated plants, or developers. It would therefore be able to provide a route to market for established generation, and ease developers' access to financial support by providing them with a large, stable off-taker.

One of the main advantages of an authority-backed supply is the ability to sign longer-term contracts (e.g. for length more than five years), with local embedded generators. This will potentially allow EfL to support additional local generation assets as long-term PPAs are favoured by financial institutions when looking to back new projects. Existing generators, on renewal of PPAs, may also prefer the certainty of longer-term contracts even if they do not necessarily guarantee the revenues that shorter term contract may offer.

As a fully independent supplier, EfL would be able to capture the full value of any generation assets it contracts with. Conversely though, this independent status would mean that EfL would bear 100% of the risk of such arrangements and would have to ensure that it has sufficient expertise and resource to manage its wholesale risk, or outsource this to a third party, for a small loss of value.

Finally, this option may provide the GLA with the greatest opportunity to avoid the need for network reinforcement and help alleviate peak use charging on businesses. This because as a fully licensed supplier EfL would have greater flexibility to pursue options such as time of use (ToU) tariffs that encourage domestic customers to reduce consumption at peak times. As the market evolves to accommodate smart meters and other new technologies (e.g. battery storage, electric vehicles, and demand side response) new products and services can be developed over the medium term.

2.5.8 SWOT analysis

Strength	<ul style="list-style-type: none"> • Contractual relationship with end customers • Ensures that all customer revenues are recovered by EfL • Considerable flexibility to set prices and contract terms • Potential to improve value of local generation (for generator and local consumers) • Tried and tested approach to market • Greatest scope for job creation • Long term stability with no reliance on other supplier partners for delivery
Weakness	<ul style="list-style-type: none"> • Highest entry cost of all options • Long setup time for market entry of 12-18 months or longer after financial close • Specialist skills required to establish entity and for ongoing operation • Full exposure to wholesale market and regulatory risks • Need to access working capital and credit • Not all opportunities will be realisable simultaneously due to competing calls for the company's resources • GLA does not have social housing stock or a large estate to use as 'ready-made' customer base

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Opportunity	<ul style="list-style-type: none"> • The GLA can set short-, medium-, and long-term strategy for EfL to deliver desired outcomes in London and surrounding area • Greater scope to innovate—as a licence holder that is also signatory to the industry codes, EfL could suggest rule changes • Can sell gas and electricity nationally • Leverage in additional energy-related services—e.g. soft loans to local business for new energy efficient equipment, energy efficiency installations for local residents • Option of offering Warm Home Discount to further benefit vulnerable customers • Vehicle to help underwrite local generation (through the supply business offering long-term offtake contracts) • Local employment • Potential for margin to be redirected for reinvestment in local area • Off-the-shelf option would simplify market entry
Threat	<ul style="list-style-type: none"> • Greater commercial risk due to level of working capital at risk • Other authorities begin selling power within GLA area - whether through fully licensed or white label supply arrangements • Competition from incumbents—particularly regional suppliers—means customer gains are less than predicted and so recovery of set-up costs and operating costs are delayed • Difficulty of obtaining staff with required skills, particularly considering presence of other regional suppliers • No local authority backed supplier has broken even, (although this is to be expected given the time they have been operational) so the approach is not entirely proven for them • Customer uptake below expectation, exposing GLA to financial/reputational risk • Regulatory and policy framework changes • Poor execution of implementation plan

The main advantage of fully licensed supply over the other two options is that EfL would have **complete independence**, able to capture the **full value of customer energy spend** for regional reinvestment, **set tariffs contracts and product terms**, install **smart meters**, and **purchase power from local generation**. It offers the greatest scope for creating local skilled jobs, and as the traditional route to market for an entrant, it is also the most proven path with the **greatest level of support and experience** from consultants and service providers. For this reason, fully licensed supply offers EfL **greater flexibility** and **greater revenue** compared to White Label Plus.

However, setting up EfL as a fully licensed supplier would be **more expensive** due to the workforce and IT systems needed, which somewhat balances out the greater revenue it can accrue. It is also more complicated, **requiring specialist skills** to establish. Furthermore, EfL would have full responsibility for ensuring it is compliant with **industry codes** and **regulation**, as well as ensuring it has in place a robust and efficient **energy trading** arrangements. Perhaps the most significant risk though is the **timescales involved** as the market entry process is likely to take a minimum of 12 months, preceded by 6-12 months of preparatory



work. Additionally, the requirements for **credit cover and working capital will be much greater**, perhaps in the region of £10mn.

A fully-licensed EfL could use its position, revenue and contractual relationship with customers to help **combat fuel poverty** and offer **loans to businesses** for more energy-efficient equipment. It could become a voluntary participant in schemes like the **Warm Home Discount** and act as an **off-taker for regional generation**. Longer-term, EfL would be able to play a more active role in wider sustainability initiatives and retain greater value within the region, such as helping drive **electrification of transport** and vehicle charging points. It would also have the opportunity to **purchase a pre-qualified licence** to simplify its market entry.

With most of the problems of reliance on a partner removed, a fully-licensed EfL would mainly face threats from **political and regulatory uncertainty**. The energy retail markets have been continuously scrutinised at a political, regulatory, and media level so rules and policy aspirations continually change. This risk can be mitigated however through monitoring of political trends and the adoption of sufficiently flexible systems that can respond to change.

Based on this SWOT analysis it is our initial conclusion that fully licensed supply would be an appropriate option for EfL to enter the energy market, but is less appropriate than White Label Plus given the timescales for EfL to be operational. This is because, while fully licensed supply would give it the greatest opportunity to deliver its objectives and largest turnover, it is also the most expensive route to market and involves timescales that would prove challenging to meet the GLA's aspiration to have EfL operational as quickly as possible.

A fully-reasoned final conclusion based on the local market assessment is provided in Section 4.

2.6 Counterfactual – The “Business-as-usual” Option

All of the above options for EfL must be considered against continuing business as usual and not engaging in energy supply, taking no further steps beyond its current pursuit of programmes to improve energy efficiency and alleviate fuel poverty. We consider that these programmes would continue regardless of whether the GLA sets up an energy supplier or not, and so are not given specific value. Engaging in the energy market certainly brings with it setup costs and continued operational costs, as well as the potential for reputational damage if things go wrong. There are also contractual and compliance risks such as counterparties failing to deliver or EfL failing to comply with industry requirements.

However, the opportunities that may be missed from not entering the market are considerable. These come in three forms:

- Financial risks, where the GLA has no opportunity to capture local energy spend revenue to use it to deliver desired outcomes, including improved conditions for local residential and commercial consumers (i.e. social tariffs for vulnerable consumers or social programmes)
- Social, economic, and environmental ambitions (i.e. desire for more generation and community ownership of this in the London area, or addressing energy efficiency and fuel poverty issues) are not realised over the long term due to not using a municipal-backed local energy company
- Reputational risk, where local stakeholders, residents and investors perceive that the GLA does not have the appetite to be innovative, considering the increasing initiative from other Local Authorities to enter the energy market

In addition, it is unlikely that the current energy market and policy environment is likely to be able to solve the socio-economic and environmental problems facing the London area as effectively as the GLA taking an active role in the market. Moreover, subject to the governance structure chosen, as an authority-backed

company Efl would have the opportunity to take a long-term strategic role in activity beyond energy retail by taking advantage of (if licensed) an entity that is “part of the club”, can trade, and offer contracts for the purchase of local generation.

The electricity sector in particular is undergoing structural transformation as older centralised large-scale power stations retire and the costs of “decentralised” generation technologies fall. Public energy companies have the potential to facilitate investment in local generation (including cogeneration of heat and power and the emerging battery storage market) as part of wider plans to regenerate areas, build out new green field sites, and in the longer term the electrification of transport and heating presents opportunities too. This brings a dual benefit of achieving the social and environmental targets that these projects look to address and by acting as the delivery vehicle ensure that the advantages of doing so are captured within the local economy.

As discussed in section 2.1, suppliers are at the heart of the energy market under the supplier hub principle. This means that retail suppliers can act as a single delivery vehicle for a disparate range of the GLA’s objectives, from addressing fuel poverty to supporting local generation. While it would be possible for the GLA to partner with one - or several - existing suppliers to help deliver this, as discussed above there are a number of risks and potential missed opportunities from this compared to the creation of Efl as a fully-licensed company.

As with White Label Plus, contracting with third party suppliers for the delivery of programmes to deliver the GLA’s objectives will risk the long-term viability of delivery. This can be largely mitigated by the GLA delivering long-term objectives through its own arm’s length company.

Additionally, we consider that relying on a disparate set of partners would likely result in less efficient delivery than using a single vehicle to do so. This is because potential synergies may be missed, for example use of the London Boroughs’ lists of vulnerable customers to target energy efficiency measures or prioritise smart meter rollouts to help address fuel poverty.

3 Evaluating the Market

3.1 Headlines

This section gives a detailed evaluation of the local electricity and gas markets in London. Within the following subsections, we:

- provide a definition of the local electricity and gas markets for London
- estimate the size of the contestable domestic and non-domestic market in London, looking at customer numbers and switching rates
- give a view into the level of retail competition in London
- look at the tariffs that are currently being offered to customers, and
- detail the amount of local, embedded and renewable generation in the London region that could potentially be used to supply its customers

The London region is densely populated and therefore has a large number of domestic and non-domestic customers given its relatively limited geographical spread. As of 31 January 2017, we identified a total of ~1.7mn domestic gas accounts and ~2.1mn domestic electricity accounts in the London GSP (defined in section 3.2) region. By applying national switching statistics, we have calculated the annual contestable domestic electricity market as 312,129 customers. For domestic gas, this number is 248,500 customers. These values are summarised in figure 3.1 below, which also shows the estimated contestable market for non-domestic gas and electricity.

Figure 3.1: Summary of Contestable Electricity and Gas Markets for London

Area	Sector	Number of meters	Annual switching rate	Estimated annual contestable market (meters)
Electricity (London GSP region)	Domestic	2,109,395	14.8%	312,129
	Non-domestic SMEs	271,632	16.0%	43,461
	Non-domestic I&C	18,077	19.0%	3,435
Gas	Domestic (GSP region)	1,745,000	14.2%	248,500
	Non-domestic	39,550	19.0%	7,515

The London region sees the majority of the residential energy market controlled by the Big Six suppliers, who have over 80% domestic market share. EDF Energy, as the incumbent regional electricity supplier, has the largest electricity market share. British Gas, as the incumbent national gas supplier, continues to maintain the largest share of gas accounts.

We have also identified due to the high rental population of London, the region likely has a corresponding lack of engagement from its customers. This is evidenced by London having some of the highest percentages of customers on prepayment and credit tariffs for all GB regions, which tend to be priced higher. This suggests that there may be significant possible savings for customers if they can be engaged in the market.

Compared to other regions, London has a relatively low amount of embedded renewable generation, owing to the highly-urbanised nature of the area. However, the embedded benefits of local generation in London are among the highest in the country, which could be of value to EfL if it were able to supply its customers with locally sourced generation.

3.2 Defining the Local Market

3.2.1 Geographical Footprint

The electricity market in Great Britain is divided into 14 regions. These are used as the point of reference for quantifying and measuring all electricity activity within the sector. Different terms are used to describe the regions depending on the context. For clarity in this report we use Grid Supply Point (GSP) group or Distribution Network Operator (DNO) region as these are the most widely used terms within the electricity industry³⁴—the terms represent exactly the same geographic areas.

Figure 3.2: UK Electricity GSP Regions

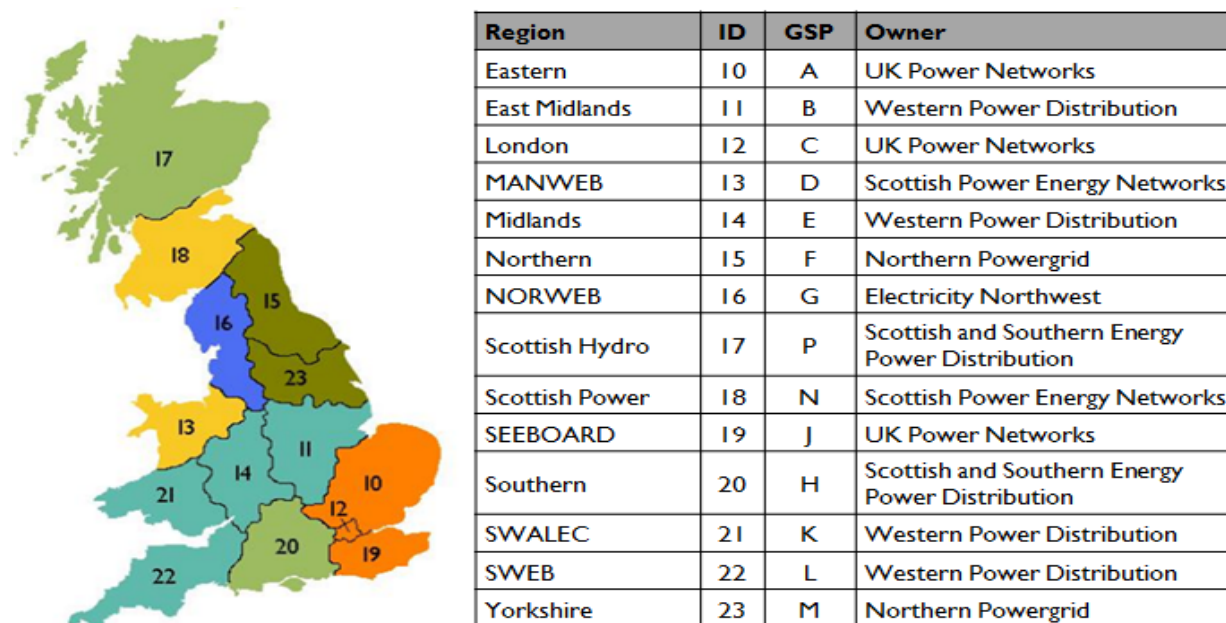


Figure 14³⁵ shows that London has its own GSP group – the London region. The distribution network is owned by UK Power Networks (UKPN), who also operate the Eastern and South East (SEEBOARD) GSP's.

For gas, there are 12 local distribution zones (LDZ) in Great Britain owned by four different network owners. London is split between the North Thames region and the Southern region. The North Thames region is owned by National Grid Gas, and the Southern region is owned by SGN. However, the operational boundaries of these two regions differ from those of the London electricity GSP region³⁶.

The majority of data in the energy sector is granular to a GSP Group level. Therefore, the London GSP region will be the most commonly used scale for market opportunity in this report for both gas and electricity.

It is important to note that EfL's municipal supply company would not be restricted to the London GSP region only. Under current supply license arrangements, the company would be able to supply in all 14 GSP regions

³⁴ GSP group refers to one of the 14 electricity regions related to demand charges associated with the national transmission system (aka "the grid"), whereas DNO refers to one of the 14 electricity regions (the same footprint as a GSP area) related to charges associated with the local lower voltage distribution network.

³⁵ [Map of UK electricity distribution regions](#)

³⁶ [UK gas distribution regions](#)

across GB. However, we have chosen to focus on the London GSP region because it is in line with the goals of EfL, setting up a local supply company to provide benefits to consumers in and around the area.

Finally, it is also important to note that the energy market boundaries will differ from those of the GLA. We understand that the areas covered by the GLA are slightly larger than those covered by the London GSP region. The Southern, Eastern, and South Eastern GSP regions all encroach into the areas covered by the GLA. It is likely that there are additional customers in the areas covered by the GLA that aren't covered by the London GSP region. Areas such as Croydon and Bromley will have many customers fall within the South Eastern GSP, areas such as Harrow, Enfield and parts of Dagenham and beyond have customers falling within the Eastern region, and areas such as Hounslow will have customers that fall into the Southern region³⁷.

3.3 The GLA's Own Estate and Local Market

The paragraphs below detail the size of the GLA's own estate electricity and gas consumption, the number of social houses in London and the number of which are voids. This is important to assess as usage by sites which the EfL is able to directly contract for can represent a core 'foundation' to supply. If this is a sizable portfolio it can be a valuable asset to help absorb and spread the costs of market entry.

We understand that the GLA's own estate is relatively small, comprising of two main sites including Trafalgar Square and City Hall. It is important to note that these sites are classed as non-domestic, and so EfL's ability to provide the GLA's own estate with energy would depend on whether it set up a non-domestic supply business in addition to domestic supply. Furthermore, switching energy supplier will depend on the current contractual arrangements that are in place. Figure 3.3 details the annual electricity and gas consumption from 2015-16 of Trafalgar Square and City Hall.

Figure 3.3: GLA's Own Estate's Annual Energy Consumption (1 April 2015 – 31 March 2016 (MWh))

MWh	Electricity	Gas
Trafalgar Square	289	N/A
City Hall	3,090	1,112
Total	3,378	1,112

Given the limited portfolio which the GLA is directly responsible for these are relatively minor volumes. The electricity consumption is roughly analogous to the typical usage of 1,000 domestic households and the gas consumption is less than 100 households' annual usage. Therefore, these assets alone will not provide any significant supply volume over which to defray set-up costs.

However, we understand that the GLA Group also has responsibilities for a number of functional bodies, including Transport for London, the Metropolitan Police Service, the London Fire Brigade, and Development and Strategic Planning Corporations. Access to supply volumes surrounding these services could provide additional value to EfL. However, access to these would depend on the potential interactions with the GLA's licence holder supplier, the approach taken by EfL, and standard procurement process. Therefore, we have not directly considered these volumes as part of the report, but if EfL progresses with non-domestic supply we would recommend it investigate taking these on board to help spread the costs of supply.

³⁷ [Map showing boundaries of the London GSP region](#)

3.3.1 Social housing in the GLA's area

According to research by the GLA³⁸, 786,000 households in London lived in social rented housing in 2011 (the latest data available). However, none of this social housing is owned directly by the GLA, instead being owned by either London Boroughs or Housing Associations. Figure 3.4 details the number of social rented homes in London and the estimated number of voids each year³⁹.

Figure 3.4: Social Rented Homes in London and Estimated Annual Voids

Number of social rented homes (2011)	786,000
Turnover rate (2014-15)	4.1%
Estimated social housing voids per year	32,226

These social rented homes could be a boon to EfL as, if it was able to negotiate deals with all the social housing providers, we estimate that around 32,226 of these properties which could be automatically switched to EfL's own energy company when they are voided each year (subject to any existing contractual arrangements already in place for the voids and the undertaking of the public procurement process). While this means there is no guarantee that EfL would be able to secure these, doing so would not only provide it with a low-cost source of customer acquisitions to grow its customer base, but could also be leveraged to ensure that vulnerable customers are by default placed on social tariffs.

We understand that at present encouraging tenants to switch to cheaper tariffs is a difficult and labour-intensive process. The energy industry largely views these customers as some of the least likely to engage with the market and hence why they typically remain on some of the least attractive tariffs. Therefore, switching of these properties at void is a relatively simple means to provide a more appropriate tariff and tackle one of the core contributors of fuel poverty to those in social housing. There may also be additional opportunities around these social housing voids, such as the installation of smart meters, onsite generation, and energy efficiency measures to lower energy spend. Based on our understanding of the market, functions such as this tend to be available under 'typical' white label plus supply arrangements and are obviously an option for a fully licensed supplier as well. In regard to this we note that this is an area which Robin Hood Energy has been active in both for its white label customers and own area social houses.

However, these benefits will be dependent on the relationships that EfL and the GLA has with both London Boroughs and Housing Associations, as well as the current contractual arrangements that are in place. In many cases these parties are likely to already have similar contracts in place with established suppliers, on which EfL will need to demonstrate they can improve. Additionally, these tend to be relatively long term contracts, which may limit the ability of the EfL supplier to compete for these customers for a number of years.

Therefore, while these voids would represent a boon to the supply company's customer base and a potentially valuable route to directly address fuel poverty they are unlikely to provide a significant impact on the business case. Instead, they should be treated more as a potential beneficial extra which could be slowly be brought into the portfolio over time, and in lower numbers than the theoretical potential of 32,000 per year.

³⁸ [Housing in London 2015](#)

³⁹ [Voids and lettings analysis 2015](#)

3.4 The Local Market

This section provides an examination of the market within the assessment area. This includes the number of electricity and gas meters, the average consumption per account (to give a view of potential market size), and the relative penetration of gas supply and dual fuel offerings. It also examines the size of the potential non-domestic market.

The sections below summarise information on the local energy market for London. The primary sources for the information are:

- the charging models of the network companies, in particular the electricity distributor UK Power Networks;
- UK government regional energy consumption statistics as collated by the government; and
- Cornwall’s own regional statistics research.

The electricity and gas regions are not always contiguous and statistics on the electricity region are more detailed.

3.4.1 The Local Electricity Market

Figure 17 shows the number of electricity meters in the London GSP Region for domestic and non-domestic sectors. Data for the London GSP region is derived from UKPN’s charging model statements⁴⁰. The estimated contestable market (i.e. customers that seek a new supplier each year) for each sector is derived by applying switching rates taken from Cornwall assumptions (guided by Competition and Markets Authority (CMA) data⁴¹) and from government statistics⁴², to the total number of meters.

Based on these average switching rates we have calculated the contestable market for the London GSP region to be 312,129 domestic meters per year, approximately 43,461 small and medium-sized enterprise (SME) meters and 3,435 larger industrial and commercial (I&C) meters. As noted above there is the potential for a local supplier to possibly reach customers which other suppliers cannot, due to their greater local reach and reputation. However, we understand that switching rates in London tend to be below the national average, and so could reduce the size of the contestable market. This is largely due to the high rental population in London compared to the rest of the country. Unfortunately, no switching statistics are available on a regional basis.

It is worth noting that, normally, a domestic customer has one electricity and one gas meter per premise (where both fuels are available), whereas business customers can have several meters per site. Therefore, the number of meters should not be taken as the number of businesses within the region.

Figure 3.5: Contestable Electricity Market (Meters) for the London GSP Region

Area	Sector	Number of electricity meters	Annual switching rate	Estimated annual contestable market (meters)
London GSP	Domestic	2,109,395	15%	312,129
	Non-domestic SMEs	271,632	16%	43,461

⁴⁰ UK Power Networks Distribution charging models
⁴¹ CMA switching statistics – used for non-domestic electricity switching rates
⁴² DECC switching statistics

Non-domestic I&C	18,077	19%	3,435
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Figure 3.5 shows the estimated annual electricity consumption in the domestic, SME and I&C sectors in the London GSP Group. Data is derived from UKPN's Distribution's charging model.

From this, Cornwall has estimated annual volume of contestable electricity by sector (derived from the annual consumption information and the switching rate). Typically, consumption volumes are a better indicator of market size for business consumers as there is large variance between different non-domestic meters' consumption. Domestic customers tend to display a more uniform consumption level.

Data provided by UK Power Networks also includes electricity volumes by meter type. Using this we have been able to calculate the estimated size of the domestic, SME and I&C sectors by volume. The estimated total contestable domestic market in terms of electricity consumption for the London GSP region is approximately 1,046,854MWh/yr. For non-domestic this is 3,050,361MWh/yr.

Included in the table is the estimated annual consumer spend of the contestable market. Figures on consumer spend are derived from Cornwall assumptions and only provide indicative values to gain an understanding of the market size. We have assumed domestic spend of £150/MWh, non-domestic SME spend of £130/MWh and non-domestic I&C spend of £100/MWh.

Figure 3.6: Contestable Electricity Market (Consumption and Spend) for the London GSP Region

Area	Sector	Aggregated annual energy consumption (MWh)	Average energy annual consumption by meter (MWh)	Estimated annual contestable market (MWh)	Estimated annual consumer spend of contestable market (£)
London GSP region	Domestic	7,074,737	3	1,046,854	157,028,143
	Non-domestic SMEs	3,966,014	15	634,562	82,493,086
	Non-domestic I&C	12,714,729	703	2,415,798	241,579,850

Given the small geographical area of London compared to other regions, the size of the market is relatively large due its highly urbanised and densely populated characteristics. As previously mentioned in section 3.2, it is important to note that there will be some additional customers in the area covered by the GLA that lie beyond the boundaries of the London GSP region, but fall into its neighbouring areas. The Eastern GSP region contains approximately 3.4mn domestic electricity meters, for the Southern GSP this is 2.9mn and for the South Eastern GSP this is 2.1mn.

In general, local authorities entering the supply market believe that their brand can engage 'sticky' customers, and so increase switching rates and the contestable market, particularly amongst the more vulnerable segments of the population. At present, there are two fully licenced local authorities operating in the market: Bristol Energy and Robin Hood Energy. Some of the ways these local authorities have tried to engage with the local market beyond standard marketing routes include:

- newsletters
- educational pamphlets
- email campaigns
- workshops and seminars

- physical shop windows

With only two local authorities having a full supply licence, it is still too early to fully understand whether or not councils are able to engage with disengaged customers and increase switching rates. However, anecdotal evidence and the development of schemes such as fitting smart prepayment meters in social voids and for vulnerable customers suggests that these suppliers are able to reach the targeted customer segments in a way that a typical supplier is not willing or able to do.

3.4.2 The Local Gas Market

Figure 3.7 and Figure 3.8 details the estimated contestable market for gas in the London GSP region.

Domestic data comes from Cornwall’s market share research and covers the London GSP region. For non-domestic, data has been taken using the government’s regional statistics. However, it is important to note that the area defined as London in the government’s regional statistics differ to the boundaries of the London GSP region. For domestic gas, we chose to use the GSP region to align with the electricity statistics and allow for the best comparison between datasets. Unfortunately, GSP specific data is not available for non-domestic meters, therefore we have used the government’s regional statistics which we consider provides the best alternative.

In the London GSP region, there are approximately 1,745,000 domestic gas meters registered, with a total annual consumption of 23,229,239MWh. For non-domestic there are around 39,550 gas meters in London (not GSP), with an annual consumption of 18,425,259MWh. Using annual switching rates this equates to a contestable market of 248,500 domestic meters and 7,515 non-domestic gas meters.

These figures are summarised in Figure 7 and Figure 8 below. Also included in the table is the estimated annual consumer spend of the contestable market. Figures on consumer spend are derived from Cornwall assumptions and only provide indicative values to gain an understanding of the market size. We have assumed domestic spend of £40/MWh and non-domestic spend of £25/MWh.

Figure 3.7: Contestable Gas Market (Meters) for London

Area	Sector	Number of gas meters	Annual switching rate	Estimated annual contestable market (meters)
London	Domestic (GSP region)	1,745,000	14.2%	248,500
	Non-domestic (not GSP)	39,550	19.0%	7,515

Looking beyond the London GSP region, there are approximately 2.8mn domestic gas accounts in the Eastern region, 2.3mn in the Southern GSP region and 1.8mn in the South Eastern GSP region.

Figure 3.8: Contestable Gas Market (Consumption and Spend) for London

Area	Sector	Aggregated annual energy consumption (MWh)	Average energy annual consumption by meter (MWh)	Estimated annual contestable market (MWh)	Estimated annual consumer spend of contestable market (£)
London (as defined by government)	Domestic	23,229,239	13	3,307,997	132,319,884
	Non-domestic	18,425,259	466	3,500,799	87,519,979



3.4.3 Dual Fuel Penetration

Using the above data, it is possible to comment on the penetration of domestic dual fuel accounts in the London GSP region. Cornwall's research shows there are approximately 1.3mn dual fuel accounts in the region. This means that, as a percentage of total gas meters, 76% of households with access to the gas grid network are on a dual fuel contract. This is significantly below the national average of 86%. As a percentage of all gas and electricity meters in the region, 69% are on a dual fuel contract.

London has the lowest proportion of domestic customers on dual fuel contracts in the country. This is likely due to the high rental population in London, where residents take less ownership of their energy supply. As dual fuel contracts are among the cheapest deals in the market, this represents a potential saving to consumers and could help tackle fuel poverty in London if EfL was able to engage consumers on this point.

In theory, this low level of dual fuel take up means that the potential argument behind launching as a dual fuel supplier is reduced compared to some other regional suppliers. However, given the two routes under consideration, white label plus and fully licensed supply, have similar entry costs regardless of single or dual fuel entry we would recommend that the EfL looks to entry as a dual fuel supplier from day one.

3.5 Retail Competition trends

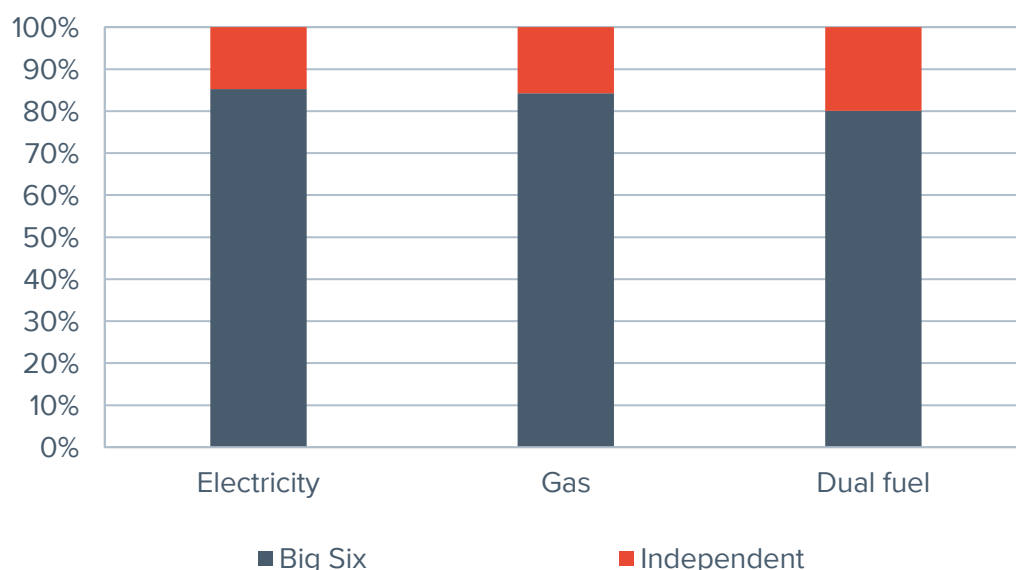
Here we examine the competitive retail landscape, the relative market share of independent suppliers and the Big Six within the area, and what this means for EfL's market entry ambitions.

3.5.1 Residential Market

The London GSP Group sees the majority of the residential energy market controlled by the Big Six suppliers, in-line with the national average. EDF Energy, as the incumbent regional electricity supplier, has the largest electricity market share. British Gas, as the incumbent national gas supplier, continues to maintain the largest share of gas accounts.

Figure 3.9 shows the breakdown of market share between Big Six and independent suppliers by fuel. This highlights the common trend for independent suppliers to have a larger share of the dual market than single fuel customers. Reasons for this are varied, but include launching as dual fuel suppliers from day one, and the greater likelihood of customers still on single fuel contracts being disengaged from the market. Data is taken from Cornwall's market share research. Big Six market share in the London GSP Group is approximately 83% of all accounts, which is similar to the national average of 82%.

Figure 3.9: Residential Market Share in the London GSP Region, Independent vs Big Six – 1 January 2017



3.5.2 Business Retail Market

Data for non-domestic market share is less granular for individual GSP regions. Therefore, the paragraph below refers to Great Britain, and is indicative of market share on a regional basis. Information in this paragraph comes from Cornwall Insight’s work in *Competition in British Business Energy Supply Markets*.⁴³

Cornwall recorded 54 companies actively supplying energy in the business electricity market as at January 2017, and 51 suppliers active supplying business gas (67 suppliers in total). 38 of those supply both electricity and gas to the non-domestic sector. Aggregate major supplier share has decreased across all gas and electricity sectors. Other independent suppliers now account for more than a quarter of electricity by volume share and more than 80% of gas by volume share.

3.5.3 Recent Trends in Market Entry

Information on the recent trends in market entry in the GB retail market, including the number of new entrants and market share.

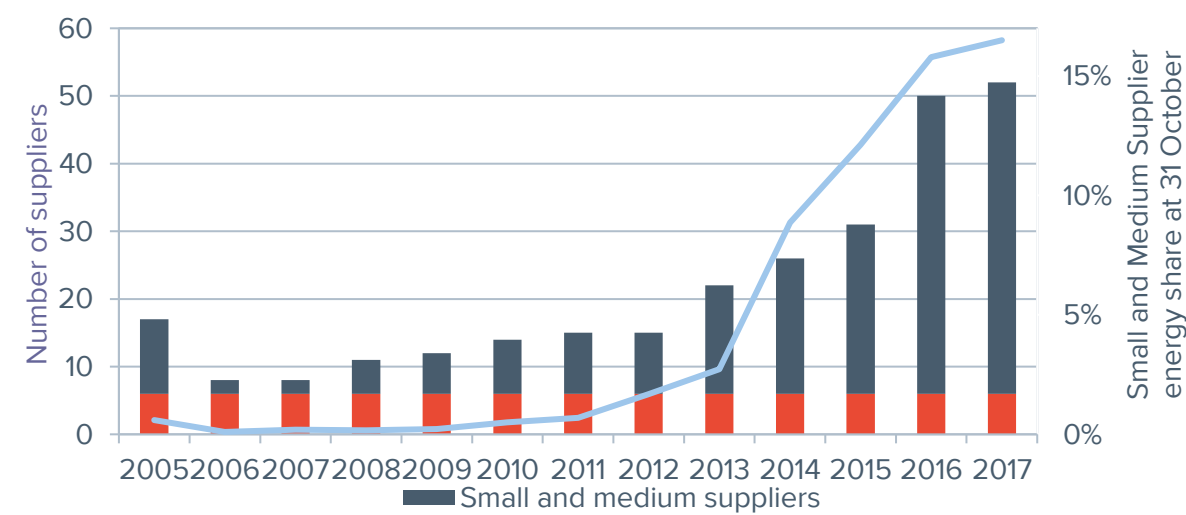
The GB supply market has seen a significant increase in competitive activity in recent years, with both the number of independents and their market share rising significantly. According to our research independent suppliers held over 16% of the residential electricity gas markets by January 2017. For the dual fuel market only, independents held nearly 20% by the same period.

As of 31 January 2017, the number of independent suppliers operating in the residential market rose to a record high of 39 for electricity and 44 for gas. 38 of these suppliers offer both gas and electricity, while six offer gas only and one offers electricity only. Therefore, there are currently more suppliers operating in the business electricity market than in the residential electricity market.

Figure 3.10 shows the number of new entrants in the residential market over time, and Figure 3.11 shows details the sectors that each supplier operated in.

⁴³ <http://www.energy-uk.org.uk/publication/295-research-and-reports/cornwallenergyreports.html>

Figure 3.10: Domestic Supplier Growth from 2005 to 31 January 2017



*2017 share is at 31 January 2017

Figure 3.11: Suppliers in the Market and the Sectors they Occupy

		Dual fuel	Electricity Only	Gas Only
Domestic and Non-Domestic	Large Suppliers	British Gas EDF Energy E.ON UK	npower SSE Scottish Power	
	Medium Suppliers	Extra Energy Ovo Energy	Utility Warehouse	
	Small Suppliers	Bristol Energy Bulb Economy Energy Ecotricity Engie GnERGY	Go Effortless Energy Good Energy Positive Energy LoCO2 Energy (now Solarplicity) Octopus Energy Robin Hood Energy	Ephase Better Energy National Gas Zog Energy
Domestic	Medium Suppliers	Co-operative Energy First Utility Flow Energy	Utilita Spark	
	Small Suppliers	Affect Energy Avro Energy Breeze Energy E Fischer Energy Future Energy GEN4U Green Energy Green Network Energy Green Star Energy	iSupply Energy IRESA Nabuh Energy Our Power PFP Energy So Energy Together Energy Tonik Energy Toto Energy	Daligas Entice Energy Cardiff Energy Supply

Non-Domestic	SME	Axis Telecom Business Energy Solutions D-Energi Lancashire Gas and Power MB Energy	United Gas and Power Uttily Yu Energy XLN	Dual Energy Marble Power	Contract Natural Gas Crown Energy Enterprise Gas Flogas Great Western Energy Opal Gas
	I&C (Industrial and Commercial)	Axpo DONG	Danske Commodities	En-D-Co Eneco F&S Energy PX Group SmartestEnergy Symbio Energy	ENI SVD17 Statoil Wingas UK
	SME and I&C	Brook Green Supply Corona Energy Gazprom Energy	Hudson Energy Opus Energy Total Gas and Power	Haven Power MA Energy	National Gas Regent Gas Vayu

3.6 Churn

This section analyses the switching rates for domestic and non-domestic customers which were used to calculate the size of the potential market segments which EfL would be competing for. This is used to understand the potential customer base which EfL could acquire and so which of the entry models are suitable.

3.6.1 Residential Customer Switching

We have taken data from the government's *Quarterly Domestic Energy Switching Statistics*⁴⁴ to comment on consumer churn.

For electricity, the most recent government statistics show that in Great Britain 14.8% of electricity customers switch annually (using data for the latest 12 months available, to September 2016). For gas, these statistics show that 14.2% of customers switch annually. We have applied these numbers in section 3.3 to calculate the contestable electricity and gas markets in the London GSP region. It should be noted that these are national figures and not specific to the London GSP region, as these are not publicly available. In addition, the statistics presented below in the figure are separated into gas and electricity and do not detail the number of dual fuel only switches. However, we observe that it is more difficult to encourage a dual fuel customer to switch supplier for only one of their fuels. This further supports entering the market as a dual fuel supplier.

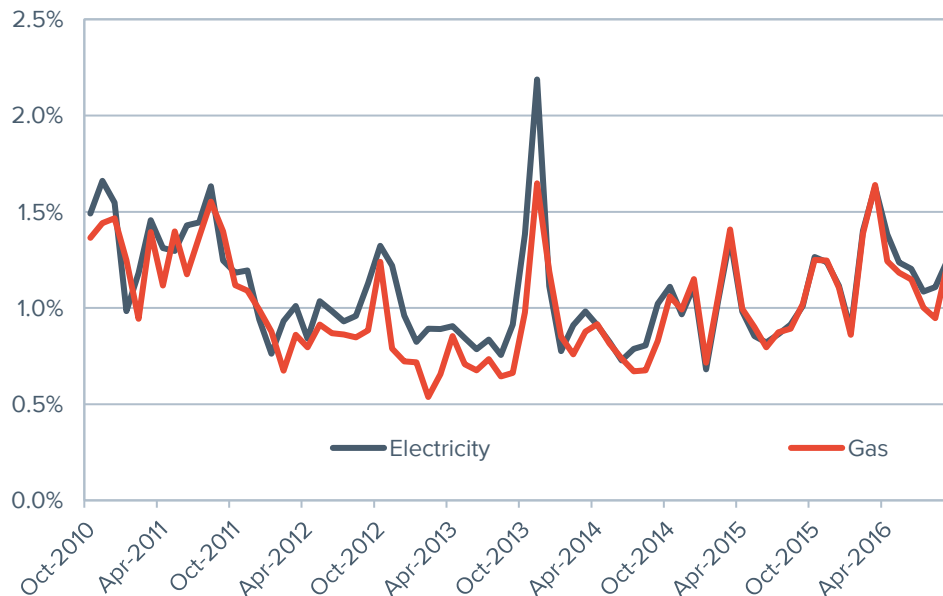
However, as noted above, due to the high rental population in London, we understand that switching rates are likely to fall below the national average.

The figure below illustrates how monthly switching rates have evolved over the past six years. It shows that switching rates declined from 2010 to 2013, and then spiked in November 2013. The spike was due to the then leader of the Labour party Ed Miliband's price freeze speech at the annual party conference and

⁴⁴ BEIS's *Quarterly domestic energy switching statistics*

increasing media attention as a result. In addition, a number of Big Six price rises occurred at this time. However, while switching rates fell back to ‘normal’ levels after the spike there has been a general upward trend since with new independent suppliers entering the market and increased consumer awareness of switching. The most recent data, published by Energy UK⁴⁵ reveals 419,599 customers switched electricity supplier in February 2017, the highest number in this month for the past three years and an increase of 21% on the previous month.

Figure 3.12: Monthly National Domestic Switching Rates Since October 2010 – September 2016



In June 2016 the CMA announced the final decisions⁴⁶ of its over two-year energy market investigation, where the CMA found that consumers as a whole were overpaying for their energy.

The key measures that the CMA decided to implement in the retail energy market included:

- Obligating suppliers to provide Ofgem with details of all customers who have been on their standard default tariff for more than three years. This information will be put on a database to allow rival suppliers to contact customers by letter and offer cheaper and easy-to-access deals based on their energy usage
- The introduction of a transitional price cap for customers on pre-payment meters (PPM), from 2017-20
- Enabling price comparison websites to play a more active role in helping customers find the best offers for them by giving them access to meter data
- Removing the requirement for price comparison websites to display the whole of the market
- Requiring micro-business suppliers to publish their prices and no longer allowing them to lock their customers into rollover contracts

The changes will be delivered through a combination of CMA Orders and recommendations to Ofgem and the government.

The CMA also issued the final versions of its Orders in December 2016. Key orders included:

⁴⁵ Energy UK switching in February 2017

⁴⁶ Final CMA decisions

- **Prepayment Charge Restriction:** it would place a new condition, SLC28A, into gas and electricity supply licences obligating suppliers to abide by caps on how much customers with prepayment meters (PPMs) may be charged
- **Database:** it would place an obligation on Ofgem to develop and maintain a database containing the contact details of all “disengaged” domestic and microbusiness customers. Rival suppliers would be given access to this database for the purposes of postal marketing which the CMA expects will boost customer engagement
- **Microbusinesses:** this Order seeks to address barriers to microbusiness engagement such as being stuck in auto-rollover contracts and a lack of price transparency
- **Restricted Meters:** the Order will require suppliers with over 50,000 customers to make available all relevant tariffs, defined as those which are capable of being entered into by any single rate customer, to each relevant restricted metering infrastructure customer

3.6.2 Business (SME and I&C) customer switching

Based on Cornwall research, 15% of SMEs will switch supplier in a year, and a similar proportion negotiates a new deal with their existing suppliers within the same timeframe. At the smaller end of consumption are microbusinesses—defined as having an annual consumption of equal or less than 100,000kWh of electricity or equal to or less than 293,000kWh of gas—which have traditionally seen low switching rates with limited engagement from a market segment with low consumption. In further detail, the CMA reports that around 14% of micro-businesses and 18% of small businesses switch annually⁴⁷. As there are a far larger number of micro-businesses, Cornwall has taken a value of 15% for SMEs.

In terms of industrial and commercial (I&C) consumers, Cornwall research estimates that approximately 19% of customers switch suppliers each year. This is also based on data reported by the CMA and is consistent with the view that businesses that have higher consumption levels are more likely to switch suppliers compared to smaller consumers.

There are 1,293 high voltage half hourly metered electricity sites in the London GSP Group. Many of these connections will be for large business users where there are multiple meters at one site. Research from our market share reports shows electricity consumers of 1,500MWh/year will have an average of three meters per site. Up to 50% of these sites will renegotiate their supply contracts on an annual basis.

Although switching data is less granular for non-domestic, there is anecdotal evidence that non-domestic switching rates are increasing. Ofgem’s report *Micro and Small Business Engagement in Energy Markets*⁴⁸ by BMG Research Ltd, published 25 May 2016, concluded that just under half of businesses (47%) have looked into other supplier or contract options (with their existing supplier) or ‘shopped around’ in the last 12 months.

Other key findings included:

- The majority of businesses on a fixed term contract (82%) review their supply arrangements when their contract comes up for renewal
- Nearly two thirds (64%) have switched supplier in the last five years; this is a significantly higher proportion than reported in 2014 (60%). 13% have switched at least three times in this period
- A third of businesses have not switched in the last five years

⁴⁷ CMA Energy Market Investigation, inclusive of switching statistics

⁴⁸ *Micro and Small Business Engagement in Energy Markets*

While cost savings remain the main factor in decisions to switch, knowing that a contract was coming to an end and receiving a renewal notice from an existing supplier were also significant triggers.

3.7 Tariff Spectrum

This section provides a baseline of the current tariffs on offer to ratepayers within London. This demonstrates the market which EfL would be entering as a supplier and provides accurate information on the level of savings available to customers who switch.

For the purpose of this report we have highlighted the tariff spectrum for the residential sector in GB with particular focus on the London GSP Group. The comparison includes: fixed one year, variable and prepayment tariffs, as we aim to show the expected competitive landscape from a tariff perspective for potential EfL residential customers. We are unable to present this information for non-residential customers as contracts are typically negotiated on a bespoke basis for each individual site.

Figure 3.13 first shows the percentage of accounts in the London GSP Group according to the type of payment in the electricity and gas residential sectors. As is shown, direct debit represents 44% and 45% of all gas and electricity accounts respectively—the lowest percentages for all GB regions. Prepayment represents 21% of electricity accounts and 20% of gas accounts—some of the highest percentages for all GB regions. London also has the highest percentage of credit payments for all regions. Again both of these are likely due in part to the higher than average proportion of private rented homes in London and corresponding lack of engagement from these customers.

This suggests there may be significant possible savings for customers within London, because credit and prepayment tariffs tend to be substantially more expensive than those for direct debit customers. However, as of the 1 April 2017 Ofgem will implement a prepayment price cap. The impacts of this can already been seen in Figure 3.14 where prepayment tariffs are now slightly more competitive than before the cap was introduced. We provide further detail in the following section.

Figure 3.13: Percentage of Accounts in the London GSP Region by Fuel Type, September 2016¹

Fuel type	Credit	Direct debit	Prepayment
Electricity	35%	44%	21%
Gas	35%	45%	20%

Figure 3.14: Cost Variations by Tariff Type for the London GSP region (Average Large Supplier vs Cheapest) - 28 February 2017



3.7.1 Tariff Spectrum

There are a wide range of one year fixed tariffs in the market which range in price by roughly £200 over the regions. One year fixed tariffs tend to be the cheapest, aimed at attracting new customers. The Big Six generally price fixed tariffs higher than the independents but often intermittently lower prices in order to gain customers. A growing number of independent suppliers has meant an increase in the number of cheap

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competitive tariffs on the market. EDF is currently offering highly competitive one year fixed tariff across most regions, whilst the rest of the Big Six generally offering more expensive tariffs than most of the independents.

The London supply region has some of the cheapest dual-fuel tariffs available, partly due to some suppliers particularly targeting the area. New entrant IRESA offers the cheapest tariff in the market.

Figure 3.15: 1 year Fixed Tariffs Regional Comparison - Direct Debit Payment - Ofgem Medium Consumption – 28 February 2017



Figure 3.16: Large Supplier Average Cheapest 1 year Fixed (Tariff Movements)

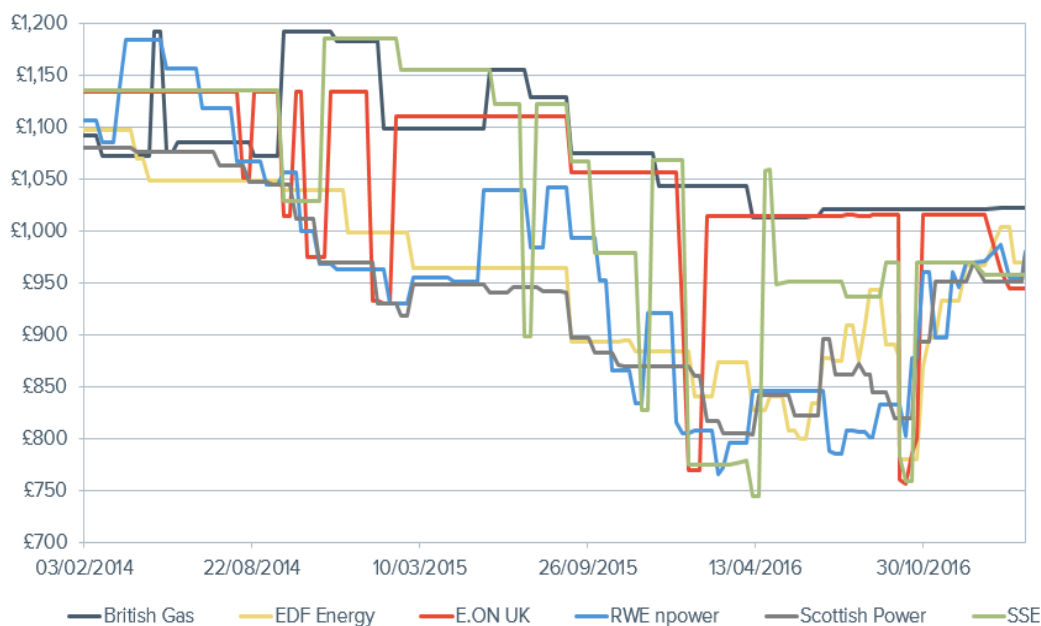


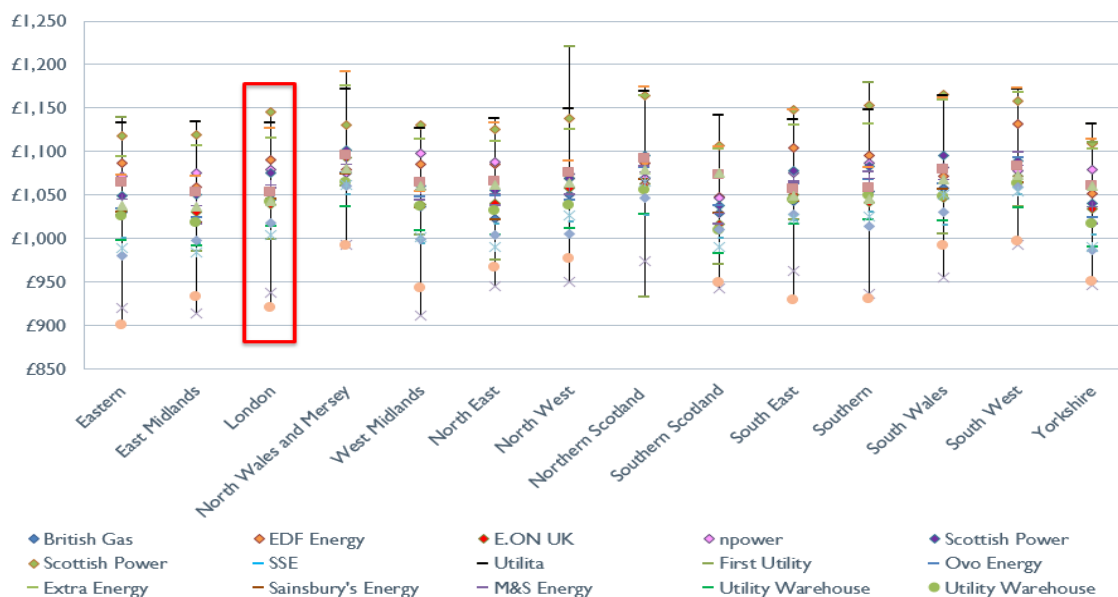
Figure 3.16 shows how the average cheapest one year fixed tariff offered by larger suppliers have evolved since 2014. E.ON, npower and SSE's cheapest fixed undergo large changes fairly frequently. These sudden

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drops in price indicate times when the supplier is trying to gain customers. Scottish power, EDF and British Gas are more consistent suppliers, making more small regular changes and fewer large changes.

The variable tariff market exhibits different strategies. Recent smaller suppliers Spark and GnENERGY offer competitive variable tariffs designed as acquisition tariffs competing with the one year fixed market. Tariffs of £1,000/year and above are generally designed as standard variable roll-off tariffs which customers will move on to when their fixed term contract comes to an end. Around 66% of customers are on standard variable tariffs according to figures published by Ofgem in December 2016; these customers will therefore be paying

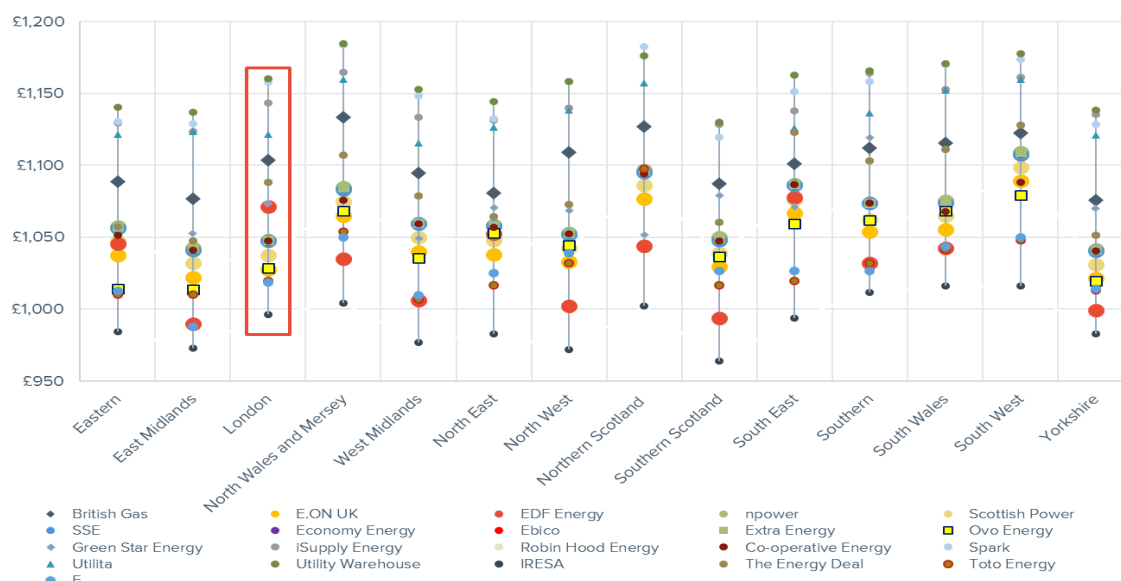
Figure 3.17: Variable tariffs regional comparison - Ofgem Medium - 28 February 2017



significantly more than those on fixed tariffs as seen in the figure below.

Prepayment tariffs are more expensive than paying by direct debit due to the additional costs of meter installation and maintenance. There are also fewer fixed tariffs in the prepayment market, with the majority being variable.

Figure 3.18: Prepayment Tariffs Regional Comparison - 28 February 2017

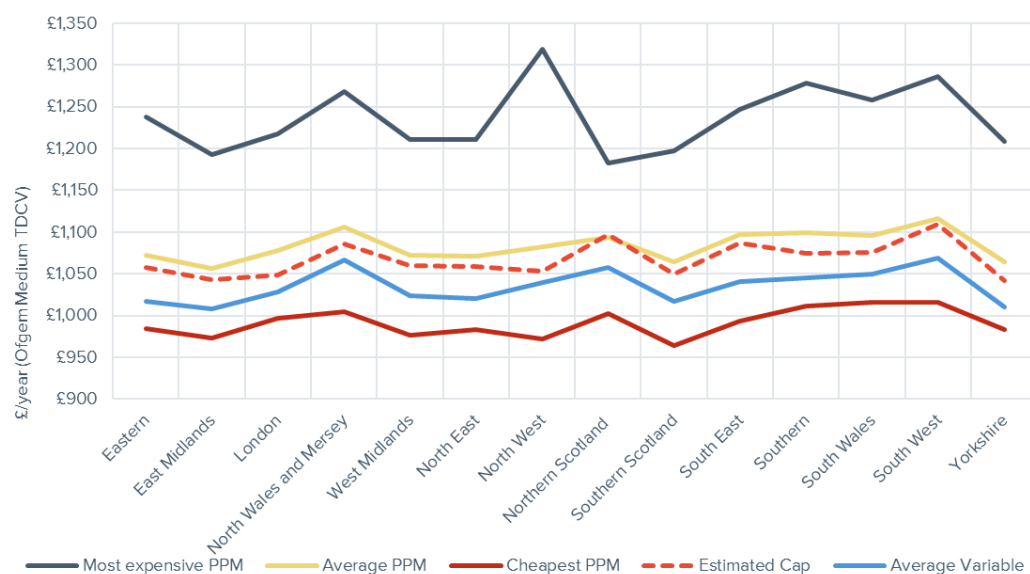


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We have recently seen several smaller independents entering the prepayment market such as iSupply Energy, Bristol Energy, Robin Hood Energy.

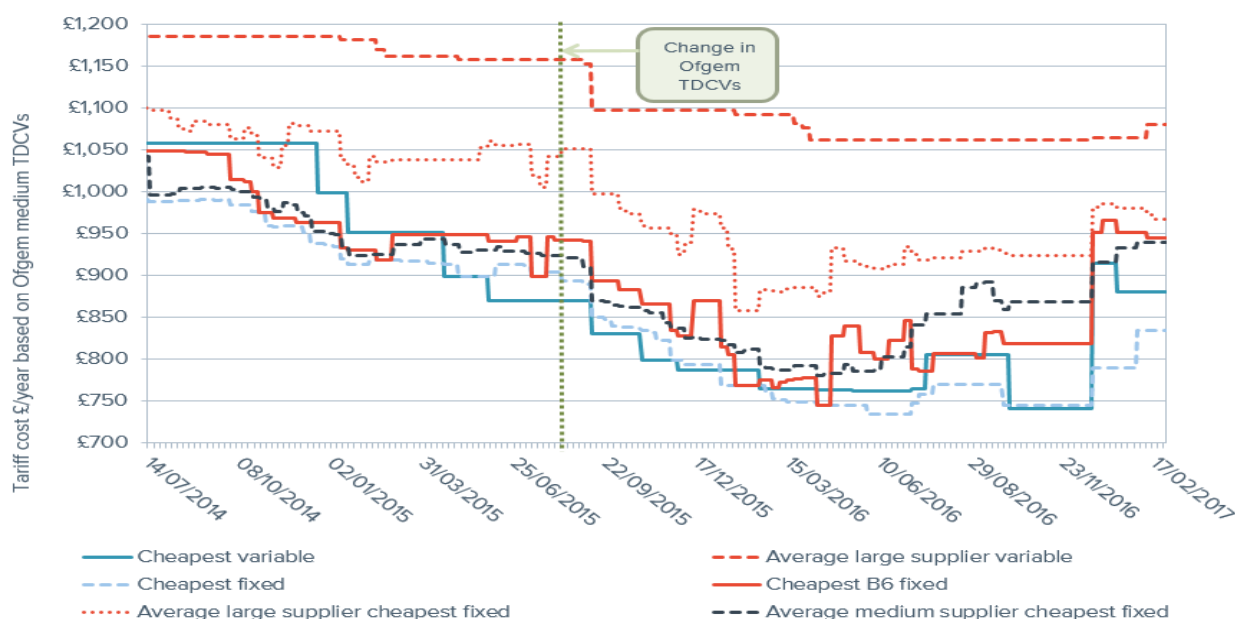
As of the 1 April 2017 Ofgem will implement a prepayment price cap which will be updated on a six-month basis until 2020, ending in conjunction with the completion of the smart meter roll out. Averaged across all regions the cap has been set at £1,067/year (Ofgem medium TDCV) for a dual fuel customer, the level of the cap varies depending on consumption and is calculated independently for electricity, gas and economy 7 customers. There are also fewer independent suppliers operating in the prepayment market as they are not obliged to offer it as a payment method until they reach 50,000 customers. The chart below details the estimated impacts of the introduction of the prepayment tariff cap. As can be seen in most regions the introduction of the cap will mean a reduction in the average PPM and a significant reduction in the highest PPM tariffs.

Figure 3.19: Estimated Impacts of Prepayment Cap



The average Big Six variable tariff remains much higher than the rest of the market, due to these tariffs being designed as standard variable roll-off tariffs. The price gap between the average big six fixed and the medium and cheapest tariffs was fairly consistent to October 2014, but has reduced considerably in the last couple of months due largely to rising wholesale prices. The cheapest Big Six fixed tariff remains competitive with the average medium supplier cheapest fixed. We illustrate this in the below figure.

Figure 3.20: Tariff Movements⁴⁹



Through this we aim to show the changing conditions in the residential retail GB energy market to further assess opportunities of developing a local energy company.

3.8 Local Generation

This provides information on the level of distributed generation in the area, particularly those registered to the Renewables Obligation (RO) and Feed-in Tariff (FiT) Schemes. This is intended to provide a view of the level of potential generation with which EfL could contract with to meet its supply volume.

It is understood that EfL is interested in supporting local (renewable) generation where possible through the establishment of a London energy company, albeit as a secondary objective to addressing fuel poverty. This section details the amount of known generation capacity connected to the distribution system, and could therefore be entitled to embedded benefits. Also provided is some commentary around future generation capacity which has been accepted for connection in London.

This is important to EfL's long-term sustainability goals as much of the generation capacity coming online in the future will be from low carbon sources. This provides an opportunity for EfL to contract with low carbon generators and supply the local market, achieving long-term carbon reduction targets while simultaneously potentially receiving considerable revenues. We understand that the GLA itself currently has relatively little of its own generation assets, consisting only of a solar photovoltaic (PV) system on the roof of City Hall. Any generation assets itself may invest in in the future could provide further opportunities for EfL, as this would provide a source of generation which can be linked through EfL's own energy company. Additionally, and perhaps more relevantly, it will also have the potential to contract with distribution connected generation owned by other parties, including Local Authorities. Although it is possible to contract with generators inside the London GSP, the limited volume of generation assets within the London GSP given spatial constraints

⁴⁹ TDCV = Typical Domestic Consumption Value. This is a measure used within the industry to compare prices based on low, medium and high "TDCVs".

suggests that it is more likely contracts being made with generators outside of the London GSP. This has implications for the possible embedded benefits that could be secured and so should be borne in mind.

The distribution system (or network) is the system that carries electricity from the high voltage transmission grid to industrial, commercial and domestic users. The distribution system in England carries electricity at 132kV and below. A distributed generator (or embedded generator) is one which is connected to the distribution system rather than the transmission network. The term capacity refers to the size (or power) of generators, and is measured in this report in MW (Megawatts). This differs to MWh, which is a unit of energy rather than size (or power).

3.8.1 Embedded and Renewable Capacity in the Region

In this section, we have identified the volume of renewable generation in the London GSP region as registered under the Renewables Obligation (RO) and Feed-in Tariff (FiT) schemes. We have also commented on the amount of embedded generation, which includes renewables and non-renewables, in the region.

The RO scheme is designed to incentivise renewables generation, generally larger installations ranging from 0.05MW to a few hundred MW, through a certification system. In contrast, the FiT scheme incentivises small-scale low-carbon generators under 5MW with payments for the electricity they generate and for the power they export onto the distribution network.

Figure 3.21 shows the amount of accredited capacity registered under the RO scheme in the London region, as estimated from detailed data provided by UK Power Networks' Long-term Development Statements⁵⁰. UK Power Networks' latest Long-term Development Statement was published in November 2016, so some of the values detailed below will have changed since this time.

Figure 3.21: Embedded Generation Potentially in the RO Scheme

Technology	Potential embedded capacity in London GSP (MW)	Notes
Solar PV	12	Much of this is likely to be FiT accredited capacity
Wind	5	Some of which might be FiT accredited
Biogas	6	
Combined Heat and Power	219	Not all CHP is RO eligible. Much of this is likely to be gas CHP, and therefore non-renewables
Sewage	14	
Waste Incineration	101	
Total	358	This is likely to be an overestimation of RO capacity in the region. Due to the highly urban nature of the London GSP, there is little embedded generation (>1MW)

Figure 3.22 details the amount of capacity registered under the FiT scheme in the London region. Data here is acquired from Ofgem's quarterly FiT installation report, which was last updated as at 11 January 2017⁵¹.

With regards to embedded renewables capacity, we have identified an indicative total of ~452MW capacity in the London region potentially registered under the RO and FiT schemes. This is relatively low compared to

⁵⁰ UK Power Distribution's [Long-term Development Statements](#)

⁵¹ [Ofgem FiT Statistical Installation Report](#)

other regions, owing to the highly-urbanised nature of the area, which in turn limits the opportunity for Efl to contract with local generation and capture embedded benefits.

Figure 3.22: Identified Embedded Generation Under the FiT Scheme to 31 December 2016

FiT technology	London capacity (MW)	
	All	Of which is >0.03MW
Anaerobic digestion	5	5
Photovoltaic	88	20
Wind	1	1
Total	94	26

For the RO scheme, we have estimated a total potential capacity of 358MW in the London region as calculated from data provided from UK Power Networks' Long-term Development Statements.

With regards to FiTs, 94MW of capacity is registered within scheme up to 31 December 2016 in the London region. However, it is important to note that

most this is small-scale solar PV that is typically unmetered for export and hence cannot be purchased for use by a supply business. Considering this, the table also highlights the amount of FiT capacity that is >30kW in size. These sites will be half-hourly metered and are therefore a potential source of contractable generation for a local supplier⁵².

Looking at embedded generation as a whole, UK Power Networks identifies a total of 446MW of embedded generation in the London GSP region, where an additional 45MW has been accepted for connection in the future. This embedded generation includes renewables and non-renewables generation above 1MW, which are connected at the distribution level. This is useful to gain an understanding of that amount of generation able to receive embedded benefits, which is further detailed in the following section.

As a comparison, the Green Alliance⁵³ identifies a total 195MW of renewable capacity in the London region. Differences are likely to be due to the geographical boundaries that are being used, the time at which the data was collected, or the inclusion of technologies such as combined heat and power. The Green Alliance has identified London as the area with the lowest amount of renewables capacity in GB.

3.8.2 Embedded Benefits

Embedded benefits are the cost advantages enjoyed by generators connected to the distribution network over larger stations connected to the transmission network. The value of these benefits varies from area to area and forms a significant proportion of the potential value of sourcing local generation. Here we provide our view of the embedded benefits available within the London area.

When supplying electricity to final users through the local distribution network (and not entering the transmission network), distributed generation enjoys a cost advantage compared to larger power stations. This cost advantage is typically described as "embedded benefits". These benefits arise from avoided liabilities to distribution and transmission network use of system (GDUoS and TNUoS respectively) charges and several other minor charges that are avoided. London has some of the largest embedded benefits in the UK. These benefits only arise where the power is consumed in the same GSP region as it is generated, i.e. the London GSP region for Efl.

Figure 3.23 below shows the embedded benefits for the distributed generation in the London GSP Region. The current value range for embedded benefits in the London GSP Group is between £9-17/MWh plus a TNUoS benefit of £51.87/kW. These can be accessed by a potential regional energy company (i.e. Efl) if it

⁵² Sites below 30kW are not required to be metered and so are typically unavailable for contracting with to meet supply volumes.

⁵³ [Green Alliance renewable energy locator](#)

could negotiate power purchase agreements (PPAs) with local distributed generators. The amount of embedded benefits that can be gained depends on the type of generator and the level (voltage) at which it is connected to the distribution network. These figures are derived from the charging models used by UK Power Networks.

Figure 3.23: Embedded benefits for the London GSP region – 2016⁵⁴

London DNO region (2017-18)	Low voltage intermittent	High voltage intermittent	Low voltage non-intermittent	High voltage non-intermittent
GDUoS (£/MWh)	£11.17	£6.41	£11.20	£6.46
Avoided distribution losses (£/MWh)	£3.53	£1.32	£3.53	£1.32
Avoided transmission losses (£/MWh)	£0.45	£0.45	£0.45	£0.45
BSUoS (£/MWh)	£2.59	£2.59	£2.59	£2.59
HEDC (£/MWh)	£0.23	£0.23	£0.23	£0.23
Total (£/MWh)	£17.97	£11.00	£18.00	£11.05
TNUoS (£/kW)	£54.97	£54.97	£54.97	£54.97

Embedded benefits in the region are among the highest in the country. The current wholesale price of electricity is approximately £45/MWh, so embedded benefits equating to around £18/MWh plus TNUoS represents a significant value source. However, the TNUoS residual benefit, one of the largest benefits, is currently under review and it is Ofgem's (the energy regulator) minded-to intention to lower this value to approximately £2/kW.

EfL would not be restricted to Power Purchase Agreements⁵⁵ (PPAs) with stations embedded in the London GSP only, but could contract with any generator in the country. However, EfL would not receive the same level of embedded benefits due to benefit level being especially high within the London area. We understand that new entrants Bristol Energy and Robin Hood Energy are both active in the PPA market. Depending on the legal and governance structure adopted by EfL, local authority supply companies are in a potentially advantageous position to offer PPAs, and therefore support local generation, as they have the financial backing of their council and so can potentially offer long term PPAs.

It is important to note that if EfL chooses the White Label Plus route, then it would be necessary to include the wholesale trading arrangements and treatment and pass through of embedded benefits as part of the contract negotiation. Based on our understanding of the current white label plus offerings, it would be possible for EfL to take part in the wholesale side of the sector if desired, or to leave this to the partner supplier if not.

⁵⁴ UK Power Networks [Connection, Use of System and Other Charging Documents](#)

⁵⁵ A Power Purchase Agreement is a contract between a generator and a supplier to provide electricity for a given period of time

3.9 Gas and Electricity Distribution Networks

This section provides a high-level view of the gas and electricity distribution networks around the assessment area. This is to examine the potential for new generation to connect within the local area, and whether there are any constraints on the local network which may restrict this.

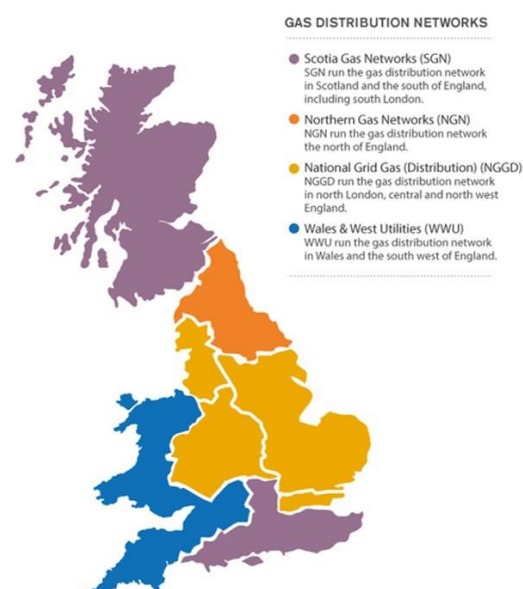
Distribution Network Operators (DNOs) are obliged to provide a Long-Term Development Statement⁵⁶ (LTDS) in accordance to the distribution licence standard condition 25. UK Power Networks (UKPN) published its latest LTDS for London in November 2016.

London Power Networks plc's⁵⁷ distribution network supplies over two million customers within an area of only 665 square kilometres. It is almost entirely urban and serves the most densely populated region in the country.

UKPN's demand forecasts indicate a significant growth in the central London area and major reinforcement schemes are already underway to meet the new demand with further schemes planned for the short to medium term. However, UKPN has forecast maximum demand on the system for the wide London GSP region to remain relatively flat until 2020-21 at approximately 6,500MW.

According to the LTDS, UK Power Networks is continuing to support the development of more efficient and sustainable forms of electricity generation. UK Power Networks have said they believe that, properly deployed, combined heat and power and distributed generation (especially from renewable sources) can bring real benefits to customers, both in terms of lower energy costs and reduced environmental pollution, while helping to meet the Government's emissions reduction targets. The deployment of distributed generation capacity within the network is also beneficial as it provides reinforcement to the distribution system. However, although supporting distributed generation, the network has identified several challenges involved with new capacity, including possible network constraints. London Power Networks is continuing to invest in solutions to these challenges to allow the continued deployment of new capacity. However, there is always a risk these challenges could provide a barrier to new deployment in the future.

Figure 3.24: Local Gas Distribution Zones



3.9.1 GDN plans

London's gas network is split between two network operators, National Grid Gas (now Cadent) and SGN.

⁵⁶ UK Power Networks Long Term Development Statement (LTDS) Long Term Development Statement (LTDS) Network Summary
Long Term Development Statement (LTDS) Detailed information

⁵⁷ This is one of the DNO regions owned by UK Power Networks (UKPN).

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National Grid Gas, one of four gas distribution network operators in GB, released its latest Long-term Development Plan in October 2016⁵⁸. The document outlines its assessment of future demand for National Grid Gas Distribution for the North West (NW), East Midlands (EM), West Midlands (WM), East Anglia (EA) and North London (NL) local distribution zones. National Grid Gas plc transports gas energy to more than ten million UK customers.

National Grid Gas plc expects LDZ⁵⁹ gas demand to drop over the next 10 years as the company is aware that greater amounts of energy efficiency measures and more electric heating in future will reduce gas demand. It is forecast that demand will drop by almost 10% from 2016 to 2025 in the National Grid Gas plc region.

However, it is still planning to invest approximately £513mn per annum in its assets during the RIIO period (1 April 2015 to 31 March 2023). This includes investment in network reinforcements and new connections for industrial, commercial and domestic customers.

The company has also expressed its commitment to increase the amount of renewable gas on the network, and has said that renewable gas could meet as much as 40 to 50% (circa 100TWh) of domestic demand by 2050. This is achievable with continued support from Government incentives such as the Renewable Heat Incentive (RHI).

SGN released its latest Long-term Development statement in October 2016⁶⁰. It supplies four million customers in the south, covering an area from Dorset to Dover and as far North as Milton Keynes and south of the Thames in London.

SGN projects that domestic energy efficiency and affordable warmth programmes will contribute to a reduction in energy growth within the domestic sector. This will continue to be the case in future years as various government schemes are introduced that are aimed at reducing carbon emissions. For SGN, it is estimated that annual gas demand will fall by 10.3% from 2016 to 2025.

SGN highlights that the eradication of fuel poverty remains one of the UK Government's objectives. SGN promotes itself as a socially responsible and sustainable energy company, and states its recognition that across the country there are many households in fuel poverty. SGN has agreed an enhanced commitment to deliver on its Help to Heat scheme to provide over 27,000 connections to low-income and vulnerable customers during the course of the current eight-year Price Control Period (RIIO GD1). It says it will continue to actively engage with local authorities, housing associations, social and private landlords and independent gas transporters to seek measures that will engage with vulnerable and fuel poor customers, to ensure they have access to efficient and affordable energy sources.

The company also highlights that the UK has a legally-binding target to obtain 15% of its energy consumption from renewable sources by 2020 and the target for 2050 is to reduce greenhouse gas emissions by at least 80% relative to 1990 levels. With this in mind SGN believe there is significant potential benefit from the development of alternative sources of gas, as does National Grid Gas.

⁵⁸ [National Grid Long-term Development Plan](#)

⁵⁹ LDZ = Local Distribution Zone. This term is used when discussing gas consumption at the distribution level (as opposed to gas consumed at the transmission level which is primarily power station or heavy industry use).

⁶⁰ [SGN Long-term Development Statement](#)



4 Evaluating the Options

This section examines and evaluates the two options under consideration and their ability to deliver the GLA's social and environmental aspirations. Within this section, we have examined the different potential routes in which supply market entry to help meet these objectives, and the likelihood of the different model's ability to deliver these. This section should be considered alongside the SWOT analyses set out in section two.

4.1 Delivery of social ambitions

We understand that Efl's main priority for entering the market is to help it address fuel poverty and aid vulnerable customers.

4.1.1 Social tariffs

Social tariffs are designed to allow suppliers to target a specific customer segment with favourable rates. In general these are aimed at customers deemed to have a higher likelihood of vulnerability, such as customers on the supplier's priority services register⁶¹, aged customers, or those in receipt of benefits. We have seen a number of examples of these types of tariffs offered into the market. These include the Age UK tariff that was offered in conjunction with E.ON. Another and potentially more significant example is the tariff offered by Spark to social housing tenants. At launch this was one of the cheapest PPM tariffs on the market and also included a small credit on the meter (£5 per fuel) to prevent debt accumulating while the property was void. This indicates the type of tariff that could be potentially offered by Efl to help support vulnerable residents.

White Label supply could in theory allow the delivery of a social tariff if an agreement is reached with the partner supplier. Ebico's previous long standing arrangement with SSE was the best example of this in the market, as the tariff structure was radically different from those offered by the parent supplier. However, this requires the cooperation of the partner supplier to deliver the tariff. This may present a barrier to delivery as it is reliant on the parent supplier's systems being capable of offering the more bespoke tariff and the agreement of financial terms. This is likely to be the larger sticking point as we understand that many of these tariffs are set at the cost of supply, or potentially subsidised. If this was the case it would likely require the sacrifice of value elsewhere by Efl and it is uncertain if a partner supplier would be willing to take this risk and loss of value. We expect that the local authority-backed suppliers will be more willing to offer this type of tariff than others due to their social aims. However, even so from our conversations with these suppliers we understand that the majority of the tariff price is determined by the supplier's core costs of supply and the only major section the white label partner has control over is the margin. Therefore, there is likely to be limited flexibility to offer significant discounts when compared to the partner supplier's own tariffs under this route to market. We would recommend that if Efl were to proceed with this route to market that it looks to include the potential to offer social tariffs as part of its negotiations with the partner supplier and ensures that it retains the potential to do so.

Under **fully licensed supply** the supplier has full control over the tariff prices offered. While it is the case that under both options end tariffs will have to change in response to cost movements a fully licensed supplier has more opportunity on when and how to pass through any changes (e.g. by tariff type, region, pricing structure

⁶¹ The Priority Services Register is a database run by suppliers that holds information on vulnerable customers.

(standing charge and unit charge), payment method, fixed or variable etc.). Therefore, in theory this route would give EfL full flexibility to offer social tariffs as desired. However, the fundamental costs of supply faced by the licensed supplier will be a major driver of its ability to offer social tariffs. While we understand EfL will be created to generate no surplus, it still needs to be commercially viable. Therefore, while this route offers greater flexibility it still faces limitations on the level and breadth of social discount that could be offered. This is particularly true for any new entrant where relatively low customer numbers/ supply volumes mean that there is a fine balance between receiving sufficient revenue from customers to cover set-up and ongoing operational costs.

4.1.2 Warm Homes Discount

Introduced in 2011, the Warm Homes Discount (WHD) is a programme that provides a one-off annual discount of £140 on electricity bills between October and April for eligible consumers. Larger suppliers (those with more than 250,000 accounts) are mandated to participate. Smaller suppliers can voluntarily participate. Where a customer receives the Guarantee Credit element of Pension Credit they can apply for the WHD.

The cost of the scheme is reconciled among participating suppliers so that there is no competitive distortion.

All the options considered should allow EfL to offer the WHD to customers. Where it is the licensed supplier itself it would require registration for the scheme and the necessary systems and processes to deliver payments. Under a white label approach, we would expect the partner to actively deliver the WHD to EfL's customers. Therefore, any partner supplier must be able to provide the WHD.

4.1.3 Energy efficiency

Due to the supplier hub concept the delivery of energy efficiency measures is primarily achieved through energy suppliers. This then represents an opportunity for EfL to help address fuel poverty. The Energy Company Obligation (ECO) scheme places an obligation on larger domestic suppliers to deliver carbon emission reductions and energy savings in households through the installation of accredited measures. The ECO is the latest iteration in a long line of energy efficiency programmes delivered by licensed suppliers dating back to 1994. The present scheme is reformed and from April 2017 has a greater focus on delivery to low income households in fuel poverty. Historically, delivery of supplier led energy efficiency improvements have been in London have been significantly below the national average. This is likely due to the higher proportion of rented accommodation where landlord permission is required to allow for installation, the large proportion of flats, and a high proportion of solid walled homes. Moreover, this dynamic means that Londoners (in general) are likely to be cross-subsidising installations in other regions as scheme costs are generally applied to all bills on a national basis.⁶²

ECO is a target-based scheme, with responsibility for meeting the overall targets split between all obligated suppliers. Suppliers that supply less than 250,000 accounts (where a dual fuel customer counts as two accounts) are exempt from the scheme. Once passed this threshold, the ECO is "tapered" until the supplier reaches 500,000 accounts, where they will incur a full ECO obligation.

Both **white label suppliers** and **fully licensed suppliers** will be obligated to provide these services once they breach the threshold, or their parent supplier in the case of white label. However, in addition to this there are likely to be wider opportunities for EfL to engage in this segment of the market. ECO is not tied to suppliers' own customers, but is based on meeting their overall delivery target. This means that local authorities are

⁶² <https://www.london.gov.uk/moderngov/documents/s60605/Minutes%20-%20Appendix%201%20-%20Transcript%20of%20Item%206.pdf>

ideally placed to identify groups of residents who would benefit from energy efficiency measures and taking these to obligated suppliers. If Efl was a fully-licensed supplier, then it could potentially combine its current understanding of resident vulnerability with information from supply to build a more complete picture of customer vulnerability.

An ongoing issue with ECO and the WHD is the ability for suppliers to share data with other parties to help target delivery of both schemes, partly due to data protection issues.

4.1.4 Smart meters

Under the government's smart meter roll-out, all domestic properties and small businesses⁶³ must have a smart meter installed by the end of 2020. Licensed suppliers have the obligation to ensure the roll-out is completed. Larger non-domestic businesses⁶⁴ have already had advanced meters rolled out under a separate but linked programme which should have concluded in April 2014. The smart meter roll-out presents a number of opportunities and potential challenges to licensed suppliers. One potential benefit is to allow suppliers to offer true time of use (ToU) tariffs to consumers. Smart meters allow consumers and suppliers to accurately track consumption. This offers several potential benefits such as reduced consumption, moving consumption away from periods of peak demand, improved wholesale hedging, and increased understanding of consumption patterns and issues.

Smart meters are being used by a number of suppliers, including British Gas and several independents, as a means to differentiate themselves from their competitors. This is particularly true in the prepayment market where suppliers such as Utilita have pioneered using smart prepayment meters to allow customers to more accurately track their usage and to allow them to top-up remotely. This could be an area which the Efl could use to both gain a competitive advantage and deliver its social aims.

However, to take advantage of potential benefits such as load shifting or true ToU tariffs, smart meters will need to be settled on a half-hourly (HH) basis. Currently domestic and SME meters are settled non-half hourly (NHH). While the CMA identified HH settlement for domestic switching as a priority in its provisional findings it is unlikely that this workstream could be started and completed before 2018-19. This means that the majority of potential benefits of smart metering will not be available until this workstream is complete.

Aside from the potential for more sophisticated tariffs, smart meters have the potential to provide additional 'softer' benefits to Efl's core market. The meters themselves can be connected to a number of 'consumer access devices' that can allow for additional services, such as health monitoring of vulnerable customers living alone. Consumption data can also be used (with the customer's permission) to highlight unusual usage patterns (e.g. periods of no consumption) and assess where energy efficiency advice/ installations may be best targeted. It is also possible to provide emergency credit so that supply is maintained, for example, overnight or weekends/ bank holidays.

As a **white label supplier** Efl would be reliant on its partner supplier to arrange the delivery and installation of smart meters to its customers. This means that the white label supplier has limited control over the rollout, including the speed at which it takes place and the prioritisation of customer groups. However, the white label plus deals we have seen have included announcements to prioritise the installation of smart prepayment meters at social properties owned or contracted with the supplier. This therefore indicates that there may be greater scope for smart meter benefits from this route to market than otherwise expected. Furthermore, this will become more significant if the 2020 smart meter rollout target is not met and there is

⁶³ Defined as electricity customers in 'Profile Class 1-4' and gas customers consuming <732MWh/yr.

⁶⁴ Defined as electricity customers in 'Profile Class 5-8' and gas consumption >732MWh/yr.

slippage beyond that date. As with other aspects of supply this will need to form a key part of the negotiations with the fully licensed supplier.

Metering is a core supply activity, which under the supplier hub principle the **fully licensed supplier** is ultimately responsible for. This means that the obligation to ensure that the rollout is completed on time for all its customers sits with the licensed supplier. However, within this obligation the supplier has the flexibility to determine which customer segments are prioritised. This could provide an opportunity for EfL to focus on vulnerable customers. Alternatively, a number of suppliers have been using the rollout of smart meters as an opportunity to differentiate themselves from the market, by offering particular tariffs, which could also be an option for EfL to grow its customer base. A major factor in the rollout of smart meters is their availability, as we understand that SMETS2 meters, which comply with the most up to date technical standards, are still in short supply. Therefore, if EfL wished to focus on smart meters it would need to factor this and the increased cost of smart meters into its business case.

4.1.5 Commentary on smart meters

We see **smart meter obligations being a key risk** for all suppliers. As noted previously, the nationwide roll-out is to be completed by December 2020. The latest official figures⁶⁵ from government show that by the end of December 2016 just under 5mn smart meters had been installed out of a total household meter population of 50.3mn. This implies that as an industry around 32,000 meters have to be replaced every single day until the end of the roll-out⁶⁶.

The obligation is particularly onerous for smaller suppliers as they have to agree terms with a meter asset provider to supply and install meters. In addition, suppliers have to ensure they have sufficient IT systems to allow them to interface with the newly created Data Communications Company that will be responsible for reading smart meters. This requires the supplier to demonstrate they have end-to-end security measures in place (that meet ISO27001 standards). All suppliers must also comply with the Smart Metering Installation Code of Practice (SMICoP) that details the level of service consumers can expect at installation, including the need for the supplier to conduct customer surveys.

It is our understanding from conversations with smaller suppliers that there are real concerns with the market for smart metering services. These primarily relate to the lack of negotiating power they have as relatively small players to access the required assets on reasonable terms and to bed in the necessary IT cost effectively. While we believe larger suppliers have similar concerns they have the scale to negotiate more reasonable terms.

Given the timeframe in which EfL is seeking to be operational we see this as a key risk. This is particularly the case should EfL look to be fully licensed itself as it will be entering the market at time where it will have limited time to complete the roll-out to its customers and be unlikely to agree terms with providers (due to scale) that can compete on price with larger players. In turn we see this as increasing the cost base and therefore ability to offer keenly priced tariffs to its target customers and potential for reputational risk and regulatory non-compliance if the roll-out cannot be completed on time.

Ofgem issued an open letter⁶⁷ in November 2016 reminding all suppliers that ‘our role is to make sure consumers remain protected during the roll-out, to monitor suppliers’ compliance with the associated

⁶⁵

https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/604217/2016_Q4_Smart_Meters_Report_Final.pdf

⁶⁶ As of 31 March 2017

⁶⁷ https://www.ofgem.gov.uk/system/files/docs/2016/11/open_letter_on_suppliers_smart_meter_roll-out_planning.pdf



obligations and potentially enforce against any non-compliance of their obligations. The letter also reminded suppliers that ‘for any activity that is outsourced to a third party, the supplier remains responsible for ensuring that licence conditions are complied with. Suppliers should assure themselves that third parties have the capacity to complete any work that they are contracted for. This could include sharing their growth projections with their third parties to ensure that this is accounted for in the third party’s planning processes. Similarly, if suppliers plan to contract exclusively with one third party provider for any activity, they should take steps to manage and mitigate the risk inherent in this. This might mean taking additional due diligence in tendering for and contracting with third parties, ensuring the contracts have appropriate incentive and penalty arrangements, and having contingency plans in place should the third party fail to deliver’.

There is no exemption for suppliers entering the market as the roll-out completion date looms.

4.1.6 Other

In addition to the main opportunities identified above, there are several other ways in which a EfL supplier could help address social issues within its core area.

One of the main expected benefits from public authorities entering the market is their ability engage the disengaged and reach out to customers beyond the ‘typical’ switcher. It is also likely that the authority entering the market will see an increased focus on energy from local media outlets. This is expected to lead to a more general increase in awareness and engagement by local residents with the market, increasing switching rates, even if not to EfL. This is one of the broader benefits of EfL entering the market, as it means that EfL does not need to offer a market leading tariff to save consumers money, but can help drive wider customer engagement through with the market. On this point, we consider that both **white label plus** and **fully licensed supply** would deliver an equal benefit.

Energy supply, particularly fully licensed, is a relatively resource intensive business that would therefore see the creation of a number of jobs within the London area. We understand that staff numbers for a medium sized, fully-licensed supplier can exceed several hundred direct employees. As a rough rule of thumb a supplier typically employs a customer service or account manager staff member for every 2,000 household customers. In addition to this there may be opportunities for skilled third-party roles, such as energy efficiency installers if demand is increased through its social activities.

4.2 Environmental opportunities

The environmental opportunities from energy supply are mainly centred around the opportunities to contract with and develop renewable generation and promote energy efficiency.

4.2.1 Public authority-owned generation

Although the GLA itself is not a local authority we frame this section from the point of view that EfL would have London boroughs as partners and potential local community groups with generation assets.

The funding and development of local authority owned generation is not specifically linked to retail market entry. The development of council-owned generation is a separate activity from supply, and many local authorities have pursued investment in generation without entering the retail market. However, market entry could aid in the development of this generation if desired. A portion of revenues from retail supply could be reinvested in self-owned generation in the ‘profit for a purpose’ model. Additionally, there is the potential for the contracting arrangements through retail supply to make the investment opportunities more inviting to investors. As a supplier EfL could potentially sign long term (10-20 years) offtake agreements with the

generation assets, which is attractive to investors where revenue certainty may trump short term price maximisation.

As a **fully licensed supplier** EfL would have full control over its contracting arrangements. Therefore, it would have the full flexibility to sign offtake contracts as desired. Fully licensed supply is also expected to generate more significant revenues in the long term which could provide greater opportunity for reinvestment.

Under typical **white label arrangements**, the fully licensed partner is normally the party responsible for the wholesale trading arrangements. However, having spoken to a number of white label plus providers in the market we understand that they would be amenable to allowing EfL to take on greater responsibility for trading or to fold in specific generation assets it owns. However, these would be subject to EfL taking on increased responsibility and likely lodging collateral with their partner to cover their trading. While standard white label does not provide a particularly reliable revenue stream to reinvest given the one-time nature of the payments, white label plus provides a more reliable revenue source.

4.2.2 Contracting with local generation

As with supporting own generation a supply entity could allow EfL to help support local generators through contracting arrangements. Again, this could be long term offtake agreements with developing generators to help ensure project completion. Alternatively, EfL could look to increase the return from local assets by agreeing above market rates with them, whether higher power prices or a more generous share of embedded benefits. However, it must be recognised that supporting local generation would be a draw on funding and resources, so would likely impact on its ability to offer social tariffs/benefits to consumers instead.

Fully licensed supply would allow EfL flexibility to contract with local generation as it desired. However, as noted above the commercial issues remain as to whether this would be in line with its stated primary objective of addressing fuel poverty. Additionally, it is worth noting that the current market provides a generous split of embedded benefits, with supplier retention as low as 1-2% for flexible generation and the generator keeping the rest, so there is limited scope here.

As a **white label plus supplier** EfL would be subject to the same restrictions as described for fully licensed supply, but with the additional factor of the partner supplier being responsible for the majority of the trading arrangements. It is unlikely that the partner supplier would be willing to sacrifice the additional value to generators and so we believe that it is unlikely that this would be a viable option under this market entry route.

4.3 Risks

4.3.1 Financial

Energy supply is a cash flow heavy business with several financial risks. We set out in an annex more detail on the modelled costs for the options considered in this report.

As a competitive market, there is no guarantee that EfL's entry into the market will be successful. Indeed, for

GB Energy Failure – November 2016

With its low cost, outsourced business model, GB Energy Supply was the forerunner of the second wave of new entry into the domestic energy markets. Entering the market in early 2015 with a cheap, variable tariff that—assuming it did not change its rates—would have a similar cost to the most competitive fixed price annual deals. Its cheap variable tariff was an industry first.

Unlike the large suppliers, as a new entrant it did not have legacy customers to cede margin to, so could price its offering sharply enough to attract customers through the main price comparison websites (PCWs). It also retained the flexibility to reprice these contracts on 30 days' notice if market conditions changed.

GB Energy Supply's most sustained growth occurred in summer 2015 and early in the following winter. The company launched its first one-year fixed tariff in mid-November 2015. In the six months to January 2016, our market share survey recorded the company expanding rapidly. Its first-year growth is the second-fastest on our records; only Extra Energy beats it.

The 2016 summer's disconnection between the competitive retail market—where consumer prices were falling—and the traded market—where wholesale prices were rising—set alarm bells ringing for many. Come August the company announced a 7% increase in its standard variable tariff. It followed this up with a 30% increase announced in mid-October to a level within 5% of large supplier rates.

A statement on the company's website from managing director Luke Watson attributed GB Energy Supply's exit to "swift and significant increases in energy prices over recent months and, as a small supplier our inability to forward buy energy to allow us to access the best possible wholesale prices, means that the position of the business has become untenable".

the first time in over ten years we have seen the exit of a domestic supplier with GB Energy leaving the market in November 2016.

Energy supply is a relatively low margin activity. Figures from the larger suppliers show that EBIT⁶⁸ margins for retail were: 7% British Gas – 2015, -0.7% EDF Energy – 2015, -6.8% npower – 2015.

For newer entrants, the following are illustrative of low margins. Cooperative Energy entered the market in 2010 and recorded its first positive EBIT margin in 2013. For the year ending January 2016 it reported 0.4% EBIT margin.

First Utility entered the market in 2008 and recorded its first profits in

2010, and has been profitable each subsequent year with EBIT margins ranging from 1.9% to 0.2% (2015). Ovo Energy entered the market in 2009 and has consistently posted losses, although it almost broke even in 2013.

The majority of costs faced by a licensed supplier are outside of its control. In simple terms around one quarter to a third of the end customer bill is made up of regulated charges associated with moving energy across networks. Although all suppliers face the same charges to use networks there are credit and collateral calls (as a rough rule of thumb to cover around one month's worth of network use) that will incur different costs for suppliers depending on credit rating and payment history. Suppliers must also collect low-carbon subsidy costs from consumers. These are similar for all suppliers (except smaller suppliers who do not have an ECO or participate in the WHD), but must consider cashflow and working capital considerations in terms of how and when costs are priced into customer tariffs before passing payment over to third parties. The key difference between the two options considered are the latitude that EfL would have regarding how and when to accommodate cost movements in customer products. We have already commented on the risks we see with smart metering where we believe smaller players are at a cost disadvantage.

The main financial risk though is associated with wholesale energy trading. This is the single largest cost item that makes up a customer's final bill and represents between 40-50% of the supply cost. The financial risks with trading can be summarised as:

⁶⁸ EBIT = Earnings Before Interest and Taxes

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- Hedging—being able to forecast accurately the energy requirements of a small but growing customer base and then finding counterparties to purchase the required volume. Suppliers have the option to offer fixed term and priced tariffs or variable rate tariffs. The former is currently seen as being more attractive to customers as it provides price certainty for a year (or more), but places the risk of the supplier to buy all energy for the length of the contract to gain the desired margin. Standard variable products reduce the risk for the supplier as prices can be adjusted as wholesale costs move, although 30 days' prior notice of price changes must be given to consumers and where price move upwards there is the risk the customer will move to another provider
- Liquidity—a long-standing issue in the energy markets, particularly electricity, is the ability for smaller players to procure wholesale products on reasonable terms for the required maturity. Ofgem intervened in the market in 2014 with its 'secure and promote' initiative that mandated larger players to make available certain wholesale products to smaller parties. It is not an obligation to trade, but to offer products. The jury is still out on how successful this has been, but many smaller suppliers (who do not have well-resourced parent companies with good credit ratings) are of the view that it is too costly to trade forward beyond a few months. This introduces risk where fixed price tariffs are sold to customers because where wholesale prices climb, which they have done in the last six months, they are exposed to costs that cannot be immediately passed onto customers
- Credit—all trading counterparties will seek a level of credit or collateral when agreeing terms. This will be a function of the supplier's credit worthiness and the maturity of the trading agreement. For newer and smaller parties with little or no trading history and no credit-rating it often results in the inability to hedge far enough into the future to give cost certainty when offering products
- Imbalance—where a licensed supplier has not contracted in the wholesale market ahead of delivery for the volumes consumed by its customers it is exposed to imbalance charges. These are only known after the event and in electricity particularly can be considerably more expensive than market prices. Credit must also be posted with Elexon, the electricity market administrator, to cover imbalance charges. Changes introduced in 2015 to the imbalance calculation arrangements have resulted in more volatile imbalance prices, which can swing between -£80/MWh to in excess of £1,000/MWh in certain half hours.

Many new entrant suppliers look to agree terms with a single trading counterparty at the outset for 'shaped' products to mitigate the risks observed in the electricity wholesale market. These structured deals see the new entrant provide shaped (i.e. half-hourly granularity) trading requirements on a regular (daily or weekly) basis to its counterparty who will provide the products at a rate agreed by formula. This may, for example, be by linked to a market reference price for different products (such as an electronic exchange platform) with a premium to cover the costs of the service provided. The new entrant supplier may also have to cover the mark-to-market risk or other arrangements to collateralise the position prior to delivery.

In practice, a licensed supplier only has direct control over its own operating costs and, to a lesser degree, the rate at which it can access working capital and credit.

Against these cost constraints is the need to provide products (and change when necessary) that are attractive enough to build customer numbers and, for EfL, deliver the stated objectives of offering tariffs that reduce fuel poverty levels.

As can be observed with GB Energy failure, where costs move more rapidly than can be passed onto customers the business will fail. For EfL the issue is compounded by the desire to attract customers that have been shown to be more difficult to reach (by the 'conventional' market at least) and that are likely by their circumstances to be less likely to be able to pay and in debt.

Furthermore, for any new fully licensed supplier there will be significant sunk costs associated with establishing the entity and ongoing working capital requirements to keep the company solvent until it breaks even.

An illustration of the sums of capital that may be required can be gleaned from publicly available sources concerning Bristol Energy. Its website⁶⁹ states that ‘as at 31st December 2016 we had received £12.2mn in funding from Bristol City Council. This will be returned with interest.’ The company’s accounts for year ending March 2016⁷⁰ showed it had total liabilities of £7.4mn.

Companies House records show that to the year ending March 2016 Robin Hood had made an annual loss of £2.5mn.

4.3.2 Brand

A non-financial risk from entering the market is the risk that actions by EfL could negatively impact upon parties’ and customer’s perception of the GLA, and its partners in EfL. While there are a number of ways this could occur, the main two are through enforcement action for non-compliances with industry rules, and ‘stranded’ tariffs, which are above market rates, costing rather than saving consumers money.

The first of these - non-compliance - is a risk all parties in the market face, although it is arguably a greater issue for public authority suppliers given their backgrounds. As a result of this we have seen larger compliance teams within Bristol Energy and Robin Hood Energy than is typical for the industry. Given that the non-compliance risk technically falls on the partner supplier in **white label supply** we have observed strict compliance controls by these parties to protect themselves. This is a double-edged sword as while it protects the white label supplier from instances of non-compliances it also limits its flexibility to act. Traditional arrangements have prevented the white label supplier from carrying out face-to-face marketing, but discussions with white label plus providers have suggested that they would be willing to support this activity, subject to adequate controls. There is also the potential for white labels to be ‘tarred with the same brush’ if their parent supplier is found to be non-compliant, but given the reputation of the parties offering white label plus we consider this unlikely. For **fully licensed suppliers** the risk is entirely internalised and arguably larger as it will be solely EfL’s responsibility to manage. This should be manageable by a suitable compliance team, although as noted this may need to be larger than competitors and so add additional costs to the operation.

Instances of non-compliances often also result in poor customer service (as much of the supply licence sets out expected behaviours when interacting with customers). All suppliers must report their complaint statistics on an annual basis and independent parties such as Citizens Advice and Which? publish complaint league tables. This is a risk for both **fully licensed** and **white label plus** suppliers.

The risk surrounding stranded tariffs is mainly for **white label plus** suppliers who have reduced control over setting tariffs. This is best demonstrated via the Ovo Communities arrangement where at some points the white label tariffs were more expensive than Ovo’s tariffs within the same region. We consider this a significant risk with this route to market, but not one that is insurmountable. Under the white label plus arrangements we have seen offered we understand that EfL would have greater, though not complete, control over the tariffs, and that they would be validated against the market, partially addressing this risk.

Fully licensed suppliers have full control over their tariffs, mitigating this risk to a large degree, although not

⁶⁹ <https://bristol-energy.co.uk/media-center/our-quarterly-updates>

⁷⁰ <https://beta.companieshouse.gov.uk/company/09135084/filing-history>

entirely. Even as a fully licensed supplier EfL would still be subject to market forces and so have limited flexibility over tariff prices offered. This is particularly an issue if some suppliers, as we believe, price not on market prices but instead in relation to their competitors. Unless EfL wished to become a heavy discounter⁷¹, it would likely not be the cheapest in the region. To date we have seen other public authority suppliers be competitive on price, but not heavily discount.

4.3.3 Contractual

Contractual risk is a major risk for **white label plus** supply. Under the industry rules white label suppliers do not own their customers; instead these are registered to the fully licensed partner. This means that if the contractual arrangement between EfL and its partner were to come to an end, it would lose its customers unless action were. This is, we consider, the most significant risk posed by white label supply. Due to this we recommend that if EfL progressed down the white label route it should seek to contractually secure its right to its customers. This could take the form of either the right to purchase its customers upon moving partner supplier or exclusive contact and marketing rights to its customers to help persuade them to switch with it. We have seen examples of both options in practice. Our understanding is that where this has occurred retention rates are high and so this risk would appear manageable.

4.3.4 Timescales

From conversations with the GLA, we understand that its ambition is to have launched a supply entity quickly so as to begin delivering benefits to consumers as soon as possible.

For this reason we conclude that **fully licensed supply presents significant challenges**. It has been shown that it is possible to establish a fully licensed supply company within 12 months, but this is starting from the position of having the preparatory work completed, which includes a full business case, funding, and governance/ company structure in place to allow contract negotiations with third party providers to commence. The setup period may also be particularly lengthy for the GLA, seeing as it does not have its own social housing stock or generation, and so may require additional time to negotiate with third parties. Therefore, while the GLA could meet its entry objective with fully licensed supply, it would require a swift decision, significant gearing up of resource, and leave little contingency, and take considerably longer.

White label plus is relatively straightforward to establish, particularly if EfL chooses to progress a 'standard' approach.

4.4 Regulatory risk

The energy retail markets are subject to extraordinary regulatory uncertainty at the moment. Although retail markets have always been heavily politicised the attention that the sector is receiving from national, regional and local politics and media is unprecedented.

The Competition and Markets Authority (CMA) concluded its two-year review of the sector in summer 2016 and its many recommendations are now being implemented—the most visible being the introduction of a temporary price cap for prepayment tariffs.

⁷¹ Some new entrant suppliers offer some of the cheapest tariffs in the market. These heavily discounted tariffs are, in our view, unlikely to be profitable or sustainable in the long-term but do allow the company to rapidly grow market share.

In parallel Ofgem has embarked on a number of work streams that will have fundamental implications for supplier operations and costs, none of which are sufficiently developed to give a clear view on the impacts. These programmes include:

- ‘Faster and more reliable switching’—this programme looks to overhaul industry and supplier systems and processes to allow customers to switch supplier more rapidly. Ofgem hopes to have the new arrangements in place by 2019
- Mandatory half-hourly settlement—to maximise benefits from smart meters the regulator commenced this work in late 2016 to introduce regulatory changes such that all customers have their actual metering data enter the central industry systems to settle the allocation of volume and costs between suppliers on real data rather than the current profiling estimation process. This will require significant system and process changes for central industry and suppliers. The form of the rule changes should be known late 2018, with implementation shortly thereafter
- ‘Principles based regulation’—Ofgem has determined that the current supply licences are too prescriptive and stifle innovation. The work is being completed in sections, but looks to regulate suppliers by having them adhere to good customer service principles, recognising some prescriptive regulation will need to be retained to protect vulnerable customers. Suppliers will need to adapt processes and potentially systems to ensure and demonstrate compliance. There is no clear end date for this, but Ofgem hopes to conclude the work in 2018-19
- Smart meters—see section 4.1.5
- Further retail market intervention—there is growing speculation that the government may introduce a wide-ranging retail price cap, possibly on the standard variable tariffs to reduce perceptions of larger company price gouging dis-engaged customers. The Prime Minister stated at the Conservative Party’s spring forum that the government was ready to directly intervene into an energy market that was “manifestly not working for all consumers”. An independent review of the cost of energy⁷² was commissioned by government on 6 August. The review will look specifically at how the energy industry, government and regulators can keep the cost of electricity as low as possible, while ensuring the UK meets its domestic and international climate targets. The review will report at the end of October 2017

4.5 Other options

Alternative options for EfL are for the GLA (or a subsidiary company) to purchase an existing operational fully-licensed supply company or to take an equity stake in an existing fully licensed supply company.

The benefit of this approach is that it has the potential to shorten the timeframe for EfL to offer products to Londoners. It also removes the risks associated with establishing a new supply company.

4.5.1 Purchase of an operational existing fully licensed supplier

There have been remarkably few supply company transactions during the history of the GB energy markets being fully open to competition except for the rapid consolidation that took place in the early years of the previous decade. At this time the original 14 Regional Electricity Companies (as was at market opening) ultimately came under the ownership of five of the Big Six energy companies. These transactions were a result of large utility companies looking to build scale in both the retail and generation markets and in many

⁷² <https://www.gov.uk/government/news/independent-review-to-ensure-energy-is-affordable-for-households-and-businesses>

cases, resulted in investment from overseas utility companies (e.g. E.ON purchased Powergen, EDF purchased London Energy, Iberdrola purchased SSE, and RWE purchased Npower).

More recently Drax Power (operators of the large coal and biomass power station) purchased the SME supplier Opus in late 2016. Drax also owns Haven Power, a supplier specialising in sales to industrial and commercial customers, and now have two routes to market for the output of their power station.

We are not aware of any transactions of supply businesses that were undertaken to allow a ‘new’ supplier to enter the market. Despite this we believe that the current state of the retail market provides greater opportunity for supply business transactions. Our reasoning is based on the high number of active suppliers in the market, which suggests that conditions are more favourable for another round of consolidation due to competitive pressures, meaning that some suppliers are barely likely to be commercially viable.

4.5.2 Taking equity in an operational existing fully licensed supplier

This option would allow Efl to partner with an existing supplier and offset the need to sink capital into the creation of a wholly new supply business. In the recent past some new entrants often had equity investment from wholesale trading counterparties as a means to access necessary trading products. For example Morgan Stanley had a stake in First Utility, which enabled the suppliers to access electricity wholesale products to allow them to hedge over longer time periods. We understand that this model has fallen out of favour as new approaches to wholesale trading have emerged that are less onerous for smaller suppliers.

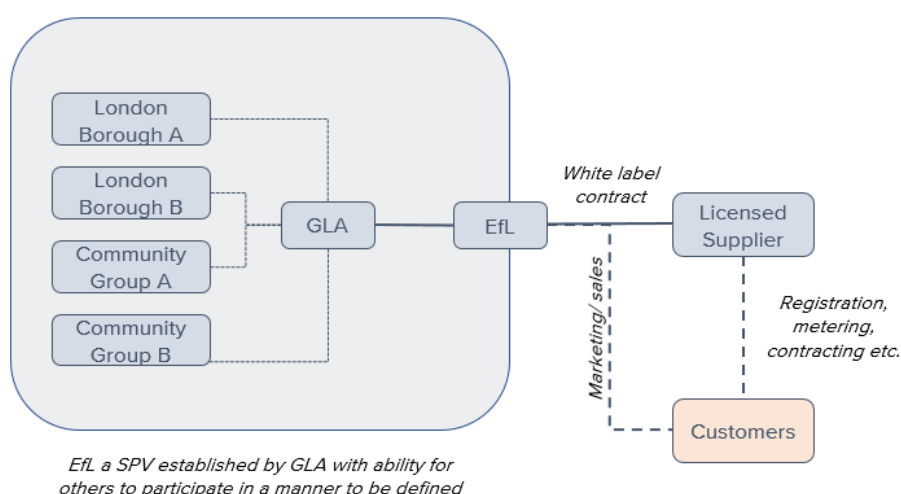
Provided terms could be agreed, we believe that this option has merit as it could reduce the timescales for Efl to enter the market and be less costly than purchasing an existing supplier outright. Aside from the cost the other key consideration for this option would be to ensure that Efl and the existing supplier can agree a position that provides sufficient flexibility for the GLA to deliver its stated aims.

With either option, significant work and resource would be required to undertake market testing to identify suppliers that would be willing to be sold or release equity, and for detailed due diligence to be completed. Although difficult to quantify, this would undoubtedly require significant legal and financial planning resource to ensure a good deal was struck. Moreover, the GLA would also have to have in place the commercial vehicle that would undertake the purchase or an equity stake.

4.6 Governance Options

It is our assumption that the Efl entity will be led by the GLA with participation from some or all of the 32 London Boroughs. The GLA also wants to ensure transparency and accountability for the local community. The commercial structure of Efl is therefore critical to allow it to operate commercially while ensuring governance arrangements are sufficiently flexible to allow numerous interested parties to be meaningfully involved in

Figure 4.1: White-label plus



delivering Efl’s core objectives.

Three options are considered by the GLA. We set out below our views on how the options could be structured and provide observations and points for further consideration. Company structure is beyond the expertise of Cornwall, but we base our comments on our understanding of how several parties have considered establishing a local authority backed energy company. We recommend that formal advice be sought from relevant experts.

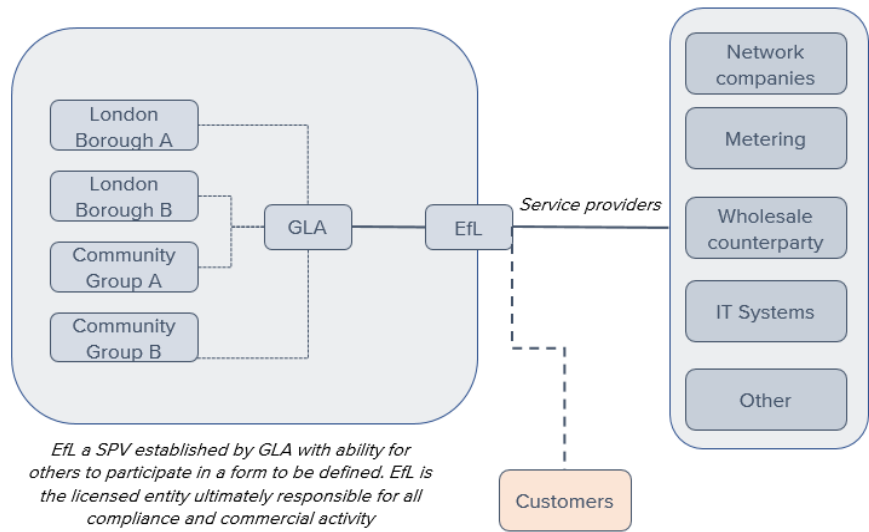
4.6.1 White label plus

This model would see GLA establish a partnership arrangement with a licensed energy supply company. Efl could be constituted as a bilateral contract between a fully licensed supply partner and the GLA, or established as a separate special purpose vehicle (SPV) that would be controlled by the GLA with its borough partners’ contractual and governance arrangements defined in a way that would allow other interested parties to share in the costs, risks and benefits of Efl’s activities.

As the white label model is significantly less onerous than fully licensed supply we believe the establishment of governance arrangements to be more straightforward. Even so Efl would have to, as a minimum, be able to make and receive payments, be staffed, and have sufficient operational flexibility to respond to white label contractual changes—particularly tariff changes.

4.6.2 Full supply licence consortium

Figure 4.2: Fully licensed supply--consortium



This model would see the GLA establish Efl as a separate company or SPV that is owned by GLA and others. We envisage that GLA would be the primary ‘owner’ of the company (at least at the outset) with contractual and governance arrangements defined in a way that would allow other interested parties to share in the costs, risks and benefits for Efls activities.

As this model requires Efl to undertake numerous commercial activities, including trading and procuring the services of several third parties, the governance arrangements would necessarily be

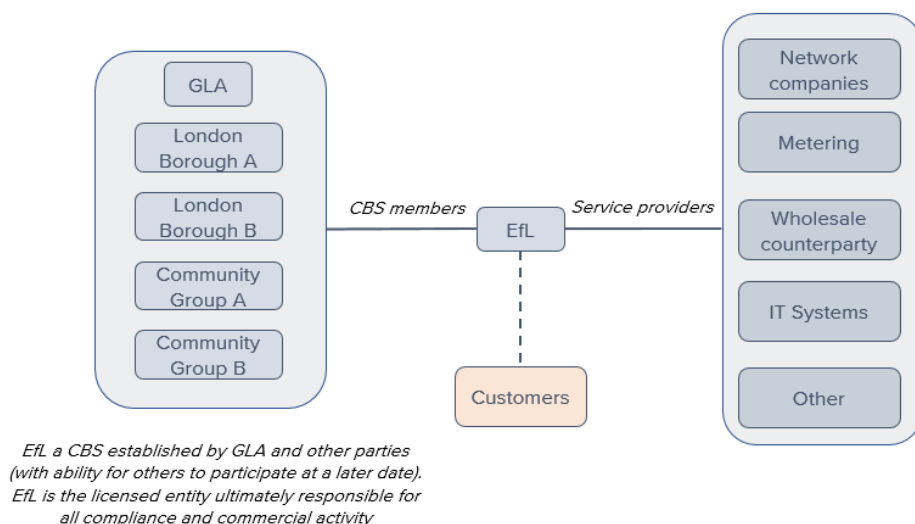
more complex and potentially less flexible. This is to ensure that Efl has sufficient flexibility to be managed by its executive to undertake necessary day-to-day activities associated with running a trading commercial entity while retaining long-term strategic setting with the owners.

It is likely that all involved parties would seek to be shareholders in Efl and be represented at board level.

4.6.3 Fully supply licence—mutual

This model would see GLA and a number of partners form a community benefit society (CBS) that would be the owners of EfL as a fully licensed supply company. The CBS model confers different obligations to the

Figure 4.3: Fully licensed supplier—mutual



consortium model that relate to the governance of EfL and its status as a charity delivering community benefits.

The energy market regulations are agnostic to the type of company structure pursued (within UK laws) but in terms of ensuring commercial viability the executive of EfL would need to have sufficient power to take necessary day-to-day decisions related to running a trading commercial operation. Likewise, the CBS would need to be governed such that it meets the CBS obligations

and ensure all members can share in the risks, benefits and costs of EfL.

4.6.4 EfL structure considerations

Expert advice will need to be sought on the detail of company structures, but we make the following observations and points for consideration:

- creating an agreed company and governance structure that balances the need for GLA, London Boroughs, and other third sector organisations to determine the business strategy and set out how surplus revenues are shared/ deployed against the need for EfL to have the flexibility and control necessary to run a business operating in a complex and highly regulated sector
- establishing a workable governance model that ensures clear delineation of responsibility for the company (and subsidiaries) and shareholders (including potential joint venture, third sector organisations, and London Boroughs) and sufficient flexibility to allow additional parties to join over time (if not all are able to do so at the outset)
- sufficient legal resource to put in place a governance structure and subsequent formation of a company that includes opening a company bank account, access to line of credit/ collateral (for fully licensed supply), recruitment of staff, and clear roles and responsibilities of executive management and board members
- describing KPIs/ reporting requirements for company/ board
- defining in detail the short, medium and long-term strategy for EfL. We envisage this as being a consultative process but also necessary to gain backing from key stakeholders and the wider community
- depending on the option ultimately selected developing (and evolving throughout the project) a Target Operating Model that clearly describes how the necessary functions will be delivered—those that can be done in-house and those that are to be outsourced.

Regardless of the option selected, appropriate commercial and governance arrangements should be identified prior to commencing any meaningful engagement with counterparties. It should be possible for the GLA to undertake soft market testing before EfL is formed to gauge the appetite of potential partners to contract with EfL, but no formal negotiations can commence until the counterparty has clear sight of the form of partner it will contract with.

As a consequence, we believe that this introduces significant risk to create an operational EfL company as quickly as possible, especially for the fully licensed options as the governance arrangements will necessarily be more complex as EfL will need to be able to draw on credit/ collateral, agree contracts with wholesale energy trading counterparties and be able to draw down significant funding to set-up as a licensed supplier.

4.7 Recommendations

The table below summarises the supply options which have been assessed against the GLA's stated ambitions for EfL. We have weighted these against our assessment of the GLA's priorities.

For the purpose of providing the 'at-a-glance' evaluation of the supply options we have doubled the higher priority ambitions scoring (in square brackets and bold font) as we have taken the view that if these cannot be delivered it undermines the purpose of EfL.

Each aspect has been given an initial unweighted score, based on our experience, of between 1 and 5, with 5 delivering the greatest benefit/ least risk. Numbers in bold and square brackets are the weighted scores.

	Investment requirement	The models incur significantly different expenditure to become operational and for subsequent access to working capital until EfL breaks even. We assume higher investment requirements present greater risk for the GLA to commit to an option (although ultimate benefits may be higher in the long-term)
Higher priority	Targeted Tariffs	A key objective of EfL is to deliver more appropriate energy tariffs for Londoners that have not been well served by the conventional energy market.
	Opportunity to address fuel poverty	This is the primary, but not only, objective of EfL. Addressing fuel poverty will include targeted tariffs but also other initiatives such as energy efficiency measures, advice (e.g. debt, finance, benefits 'health-checks') and signposting to third sector bodies.
	Be operational as quickly as possible	Supply models for EfL are aimed to be operational as quickly as possible, so as to start delivering benefits to customers as soon as possible.
Lower priority	Revenue opportunities	Any surplus revenue would be re-invested into social and environmental objectives. While it is the case that under either options end tariffs will have to change in response to cost movements, a fully-licensed supplier has more opportunity on when and how to pass through any changes (e.g. by tariff type, region, pricing structure (standing charge and unit charge), payment method, fixed or variable, margin, etc.).
	Delivery of Energy Efficiency	At the outset EfL would have relatively limited opportunities to deliver energy efficiency measures directly. We believe opportunities do exist (e.g. via a licensed supply partner or third sector groups) but as an <i>energy supplier entity</i>

	formal obligations would only fall on EfL once it has 250,000 household accounts. However, it would provide an important focal point for referring customers to GLA's energy efficiency retrofit programmes.
Delivery of environmental ambitions	Reduction of carbon emissions and promotion of renewables is an important objective for EfL. However, at the outset we recommend full focus is given to the primary objective of tackling fuel poverty, with environmental benefits being realised where possible. This prioritisation will evolve as EfL is fully established and the cost of low carbon generation continues to fall.
Local Generation Investment	Depending on the supply option, EfL could facilitate investment in local renewable investment by providing a route to market for output (directly or via a white-label partner). At the outset though we recommend efforts be focused on supply as local generation is a specialist activity. It could link to GLA's Decentralised Energy Enabling Programme, and support for solar and community energy.
Smart meter delivery	All suppliers must aim to install smart meters in every home in England, Scotland and Wales by December 2020. Given the timescales envisaged for EfL to become operational there would be little time to prioritise smart pre-payment meter installations for its customers, as all customers would need a smart meter installed in order to reach the deadline. Nonetheless we believe all options considered should allow for this.

Figure 4.4: Evaluation of routes to market

	Investment requirement	Revenue opportunities	Local Generation Investment	Targeted Tariffs	Delivery of Energy Efficiency	Opportunity to address fuel poverty	Delivery of environmental ambitions	Smart meter delivery	Be operational as soon as possible	Total score
Business-as-usual ⁷³	5 (based on least risk)	1	1	1	1	1	1	1	1	14
White label supply	3 [6]	2	2	4 [8]	3	3 [6]	3	3	5 [10]	43
Fully licensed supply	1 [2]	4	3	4 [8]	3	3 [6]	3	2	1 [2]	33

⁷³ This is a "business-as-usual" counterfactual of not engaging in energy supply. Note that we do not make commentary on the GLA's ongoing energy efficiency programmes, etc, as these are assumed to continue under an energy supply model.

Which route best suits the GLA will be down to its risk profile and ambition. We consider that if the GLA is acting alone then the evolving white label plus option presents the ‘least regrets’ option. A key consideration for fully licensed supply is the potential for EfL to supply the wider public estate across London. Although this would have to follow normal procurement routes with no guarantee that EfL would win contracts for the public estate it is an important aspect as the public estate would bring significant supply volumes over which costs would be defrayed. In turn this has the potential for EfL to break even more rapidly than if it focused solely on household supply where supply volumes are significantly lower, notwithstanding the fact that it would need to arrange supply agreements with a large number of bodies.

Therefore, this aspect should be a key consideration where EfL looks to evolve the white label option into a licensed entity. Useful lessons can be gained from the GLA’s licence-lite initiative. Moreover, other work conducted by Cornwall with local authorities (including a London Borough) suggest that existing supply arrangements may not be the most keenly priced, suggesting EfL would not necessarily be out competed.

Based on our evaluation of the market entry models we believe that **on balance white label plus provides the greatest opportunity to deliver EfL’s goals in the time for the entity to be operational.**

This is contingent on the GLA being able to secure sufficiently attractive terms for the EfL offering. While these are down to the GLA to determine, we would recommend that the below are the key negotiation points for setting up a white label:

- Annual retention payments for each customer to ensure a steady ongoing revenue stream (whether in addition to or in place of an acquisition fee)
- A degree of flexibility in the tariffs it offers, both in structure and level
- Involvement in the smart meter rollout – and from previous announcements prioritisation of the rollout of smart meters to prepayment meter customers
- Contractual certainty to provide assurance that customer tariffs will always be ‘reasonably’ priced
- Potential flexibility for contracting arrangements, whether with local generation or wholesale trading arrangements
- Warm Home Discount offer

We do not think that **fully licensed supply** is a suitable option to deliver the EfL goals. This is the primary reason for preferring white label plus, with the possibility of transitioning to a licensed position at a suitable point in the future. A secondary reason is that fully-licensed supply carries with it **considerable cost and financial risk**, while the lower costs involved in white label supply may be more manageable.

It has been shown that it is possible to establish a fully licensed supply company within 12 months, but this is starting from the position of having the preparatory work completed, which includes a full business case, funding, and governance/ company structure in place to allow contract negotiations with third party providers to commence. Given the complex and wide-ranging nature of these discussions and modelling work we consider that it is unlikely that this could be completed in a shorter timescale than 12 months. We believe that appropriate commercial and governance arrangements should be identified **prior to commencing contractual negotiations**. The arrangements will be an order of magnitude more complex where EfL adopts a licensed approach as opposed to a white label plus partnership arrangement, as EfL will have ultimate responsibility for trading, accessing significant levels of working capital and credit/ collateral (in the region of £10mn).

Moreover, the energy retail markets are subject to extraordinary regulatory uncertainty at the moment. Given the uncertainty over Brexit, the ongoing smart meter rollout, and the need for clarity over a large number of government policy positions (Carbon Price Support, Green Growth Strategy etc.) we expect this uncertainty to

continue until potentially 2020. We see the primary regulatory risks for any new entrant being the potential for direct government intervention to set some retail prices (which could undermine the business case), significant changes to central industry processes that will require all suppliers to adapt IT systems (e.g. next day switching, mandatory settlement of electricity customers, changing to a 'principles based regulation' supply licence) and real concerns that the industry wide smart meter roll-out will not be possible in the decreed timescale. This last point is particularly problematic for smaller and newer suppliers that do not have the negotiating clout of established players in seeking necessary asset providers and installers.

Although a partner supplier under a white label arrangement will also be exposed to regulatory uncertainty we believe this is less of a risk as the partner will already be operational and have had opportunity to plan (as far as possible) for the impact of the upcoming change.

Therefore, on balance, we believe it might be possible for EfL to enter the market in late 2019 as a fully licensed supplier, but we see the **risks of meeting this timeframe as being too high** to recommend this option. White label plus provides a means of delivering the GLA's objectives around fuel poverty and providing fairer tariffs, but with **lower commercial risks and shorter delivery timescales**. This approach, if a suitable partner can be found, would allow EfL to provide targeted tariffs to Londoners and additional services (such as energy efficiency installations/ advice, potential for selling local power to Londoners, etc.) and could be used as a stepping stone to transition to a licensed position at some point in the future. The partner approach would also allow EfL to build brand presence and gain useful experience of the energy markets.

4.8 Recommendations and Next Steps

Based on our findings and assessment we recommend that GLA look to undertake the following activities to progress the market entry strategy to the next stage:

- As a matter of priority, facilitate discussions with London Boroughs and large Housing Associations to determine the appetite to act together and fund an EfL supply entity. Discussions with London Boroughs should explore their current energy supply arrangements to ascertain if EfL could viably compete for contracts
- Undertake detailed market testing with white label providers to fully understand what they are offering.
- Having completed the testing and discussions, develop a detailed financial model
- Create a Target Operating Model (to include required resource for the market entry into households) and appoint an independent Business Development Manager with sufficient resource and flexibility to carry out this work