



CLEAN, AFFORDABLE ENERGY.
FOR PEOPLE, NOT FOR PROFIT.



economics as if people
and the planet mattered



Switched On London

Democratic energy in the capital



New Economics Foundation (NEF)

is an independent think-and-do tank that inspires and demonstrates real economic wellbeing.

We aim to improve quality of life by promoting innovative solutions that challenge mainstream thinking on economic, environmental and social issues. We work in partnership and put people and the planet first.

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Summary

An energy system that works

Providing heat and electricity to our homes and workplaces is one of the most basic and vital functions of our economy. No household should be unable to afford a basic level of energy.

Collectively, we have the technology and resources to provide affordable and clean energy for everyone. Bringing our energy supply closer to home also means harnessing the benefits of generating and distributing energy to strengthen local economies. Emerging technologies will only expand these possibilities.

Our energy system must be affordable, clean and accountable to the people that rely upon it.

The privatised experiment is failing

Our energy system was privatised in the 1990s. It was assumed that the profit motive would push competing companies to drive down costs and provide high quality service, while regulatory requirements would ensure that the environment and vulnerable households were protected.

The results of this experiment have been deeply disappointing. Households struggling to afford their energy bills have been at the mercy of volatile fossil fuel markets, investment in new infrastructure and research has stalled, the transition to a clean and socially just energy system has been far too slow, customer satisfaction could not be lower, and people have become disempowered in the fight against climate change.

There are many alternatives to this failing system – it's time to start discussing them.

Municipal energy is now the best alternative

This report shows that public energy led by local government would be better able to achieve social and environmental objectives compared to our privatised system and could provide a boost to local economies. It would also bring decisions about energy supply closer to the people and communities that are affected by them. Importantly, municipal energy is possible now – no new central government action is necessary to get the ball rolling.

A new public energy company for London should have the following objectives:



Affordable: Eliminate fuel poverty



Clean: Fully decarbonise the generation of energy



Democratic and accountable: Make energy supply democratic and responsive to the needs and demands of users, workers, and citizens

What we can learn from other examples of fully licensed supply

Across the UK and Europe there is a growing movement towards municipal energy. Nottingham and Bristol city councils have established their own fully licensed energy supply companies with broad social objectives, and there are reports that Manchester and Liverpool are exploring similar options. In Scotland, various housing associations and local authorities have clubbed together to form a new non-profit energy company with a social purpose.

The crucial lesson from these UK examples is that some councils can have the capacity and resources to get these projects up and running and, more importantly, they can make a huge difference – customers who switch to Nottingham's company, Robin Hood Energy, could save £265 on their annual bill.

Some of these schemes also have stated goals for purchasing or producing clean energy. For example, Bristol Energy makes clear that it hopes to work with and support local community energy schemes. Overall, however, fuel poverty and social justice have been the driving force behind these initiatives.

A public energy company for London

A new company should be set up either as a private entity fully owned by the Greater London Authority (GLA), or as a community benefit society (CBS). It should have a board consisting of local politicians, employees, and Londoners and should have a fair remuneration policy consistent with its values. The company should aim for the maximum degree of transparency that is compatible with its commercial functions.

A strategy should be developed to create and leverage new sources of financing for investment in clean power generation and insulation of housing stock. These might include divestment of pensions, municipal bonds, and revenues from the sale of energy. There should be a clear strategy for engaging and supporting community energy schemes in London.

In the short term, the company should protect customers by pushing prices down; in the long term the company should consider new forms of progressive pricing and retrofitting measures that will further reduce bills for the least well off.

What we could achieve

- If energy bills could be pushed down to the same extent as Robin Hood Energy has done, then perhaps as many as half of all fuel-poor households that switched to the company could no longer be in fuel poverty. Londoners could have their energy bills cut by as much as 25%.
- Through solar energy alone, the company could help to catalyse enough clean power generation for a fifth of the capital's electricity needs.
- By pioneering democratic and participative approaches to energy supply governance, the company could re-engage millions of citizens with issues of climate change and social justice.

1. The need for change

Energy supply companies are responsible for procuring electricity and gas from wholesale markets and delivering it to homes and businesses. In the UK, the notorious Big 6 suppliers – British Gas, EDF, E.ON, Npower, Scottish Power, and SSE – dominate this sector, though this arrangement is relatively new. This report argues that the experiment has failed and new ideas are needed.

Privatisation is a failed experiment

The energy supply industry was privatised in the early 1990s under the assumption that the private sector would be better at reducing costs and finding efficiencies, therefore benefiting the consumer. Economic theory is clear that incentivising private monopolistic utilities to make efficiency savings comes at the cost of allowing those utilities to extract profits.¹ Therefore, significant private profits are an inevitable component of this system, though advocates argue these are offset by benefits of efficiency and reduced cost.

In a previous report we highlighted the key aspects of our failing energy system.² Following privatisation, consumer prices did fall slightly at first but in more recent times have increased by a much greater amount. The lesson is that producer efficiency is not the most important determinant of prices, it is the volatility of fossil fuel markets – profit-seeking companies are not motivated to protect consumers from these impacts. At the same time there have been numerous accusations of excessive profits and exploitative practices. Levels of investment in infrastructure and research have been low in recent years and the structure of the system, with a small number of large centralised generators, will be vulnerable in an age of increasing geopolitical and climate-related risk. Finally, the energy system has fostered an unprecedented degree of public disengagement, both from the energy supply market and from the critical issues of climate change.

The UK's energy system as a whole is failing and national politicians are continuing to push it in the wrong direction. In this report we argue for a change in direction. Our focus is on London, a city that has distinct problems and its own particular possibilities for change. The rest of this section examines some of the problems created by London's current energy system.

Fuel poverty

A household is considered fuel poor if it 'cannot afford to heat its home to an adequate standard of warmth and meet its other energy needs in order to maintain health and wellbeing'.³

While the overall rate is lower than many other regions of the UK, there are still pockets of the city with extremely concerning rates of fuel poverty. For example, in the borough of Newham, estimates suggest that 15% of households (more than 1 in 7) can be considered fuel poor.⁴ Other fuel poverty hotspots include Waltham Forest, Brent, and Haringey, all of which have around 12% of households experiencing fuel poverty.

Figure 1. Fuel poverty in London. Source: DECC.⁵

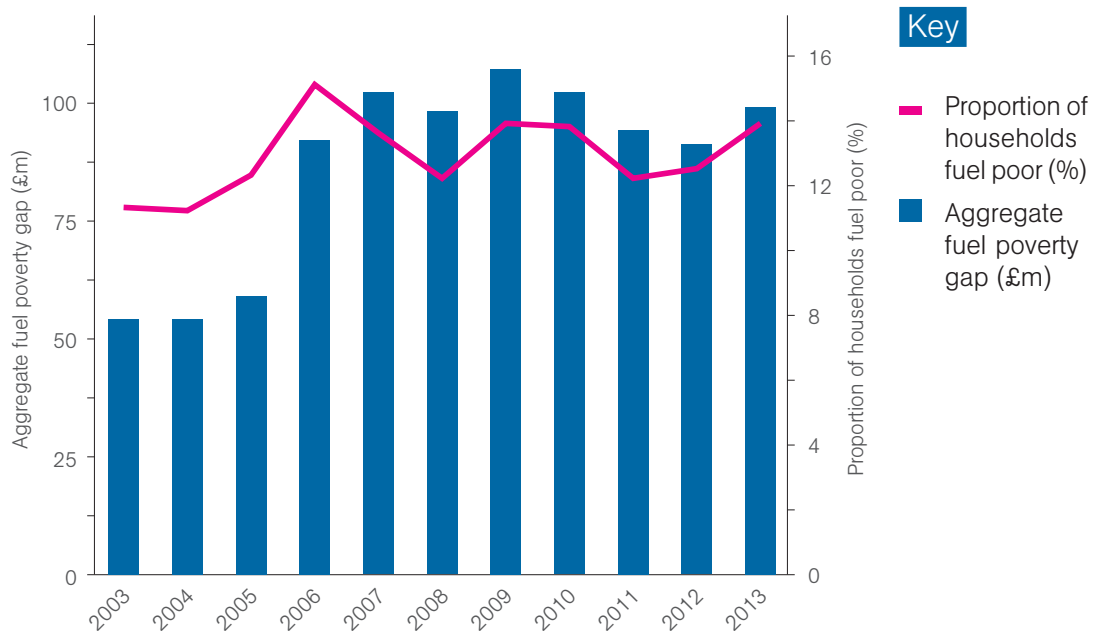
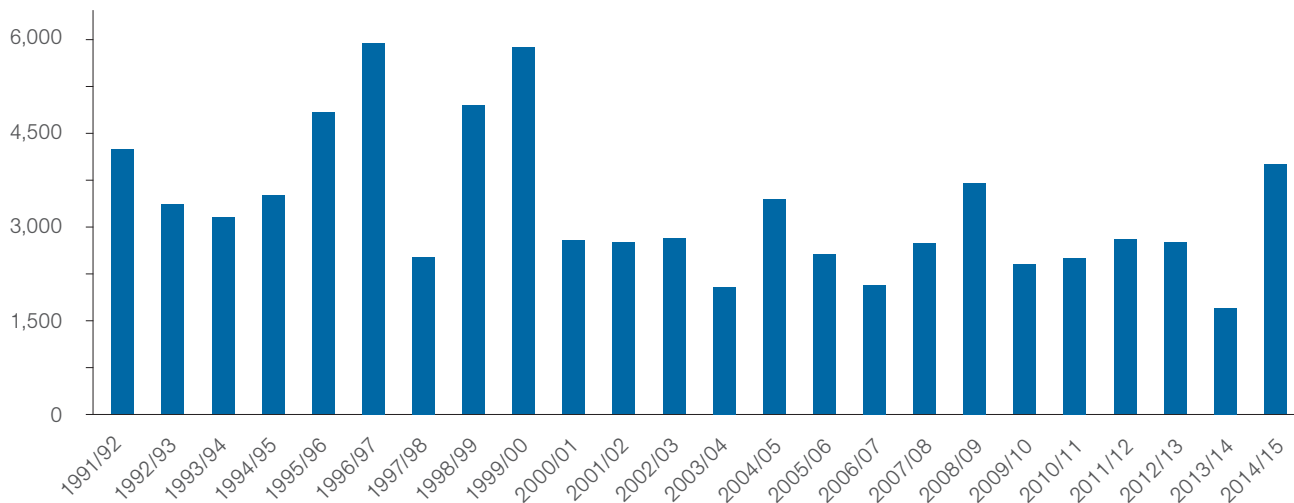


Figure 1 shows that, although fuel poverty rates in London have remained within a band of about 12-15% since 2003 (according to the government's updated definition of fuel poverty), the aggregate fuel poverty gap (which can be interpreted as the total reduction in costs required so that no households would be considered fuel poor) is substantially higher than a decade ago. In other words, the severity, if not the extent, of fuel poverty has clearly worsened in London.

Cold homes can have a major impact on health and are an important contributor to the heightened levels of mortality we observe in winter months.⁶ Provisional figures indicate that excess winter deaths in London spiked to 4,000 in 2014/2015 – the highest level for 15 years (Figure 2). The long-term trend is downwards, but many more deaths are surely preventable.

Recent reductions in energy prices announced by some of the Big 6 energy providers may provide some slight respite;⁸ however, these reductions have been relatively small and, more to the point, hoping that volatile energy markets will swing in a favourable direction is not a long-term solution to fuel poverty.

Figure 2. Excess winter deaths in London. Source: ONS.⁷

Far from playing a constructive role in mitigating fuel poverty, the large energy providers that supply Londoners have done their best to avoid mandatory schemes for insulating vulnerable households. The energy regulator Ofgem was forced to levy millions of pounds in fines for this failure.⁹ If paying fines is simpler and less costly than fulfilling social obligations then that is what profit-seeking companies will choose to do. There is only so much that regulation can achieve in this context – without having social justice as a core motivating principle, private sector energy suppliers are always going to shirk the responsibilities we impose on them where doing so is in their interests.

Fuel poverty is also the key issue at the intersection of the energy and housing crises. London's housing market has a particularly high proportion of private renters (as opposed to those who own their homes or live in social housing) – it is these households for which the incentive to improve energy efficiency is lowest since the landlord doesn't pay the energy bill and the tenant typically has limited willingness to make long-term investments in the property.

Climate change

London is uniquely vulnerable to the effects of a changing climate.

- **Droughts** already affect London's water basin and the South East generally, and projections suggest that shortages could become dramatic in the future.¹⁰
- **Heat waves** will be more severe than other areas of the country and there are a large number of people in the city who are particularly vulnerable to their effects.¹¹
- There will be an increased risk of both **river and tidal flooding**, despite existing defences.¹⁰
- The complexity of London's **infrastructure networks** – transport, energy, communications, etc. – make them especially vulnerable to disruption due to both extreme weather and the increased demand pressures that will result from climate change.

Furthermore, as the capital of the UK, London benefits from a high standard of economic development that has historically relied on fossil fuels. By some estimates, UK citizens bear the greatest historical responsibility for greenhouse gas emissions per person of anywhere in the world.¹² Despite the city's responsibility and potential, London has the lowest level of installed solar capacity of any UK region.¹³

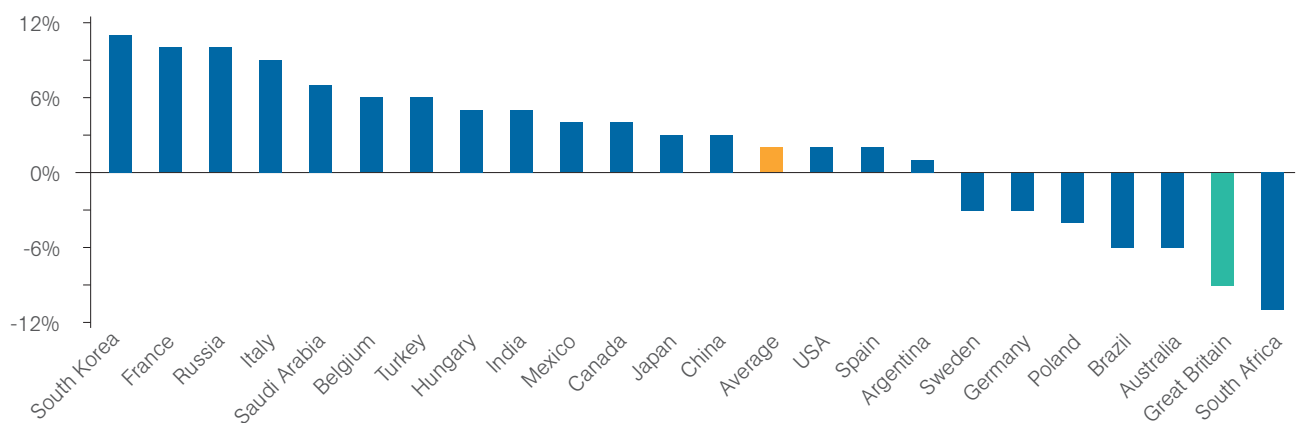
It is, therefore, both London's duty and best interest to play a constructive part in mitigating climate change. This report will argue that the opportunities for such a role at the regional level are too good to miss.

Customer experience

Public polling consistently finds an embarrassing degree of dissatisfaction with energy companies in the UK, and in particular the Big 6 suppliers.

- 2013: '68% of the public say the energy companies should be run in the public sector, while only 21% say they should remain in private hands.' 'Supporters of nationalising the energy companies include 52% of Conservative voters, and 74% of UKIP voters.'¹⁴
- 2013: 'A majority (56%) of UK consumers say that energy companies "treat people with contempt", and more than eight in ten (83%) feel that suppliers "maximise profits at the expense of customers"; 'consumers see energy prices as the 'number one threat' to the economy (22%), higher than unemployment (14%).'¹⁵
- 2013: 'When asked to choose which industries had a poor standing in the eyes of the public, utilities companies [62%] came behind only the banking industry (73%). Government departments (57%), gambling companies (55%) and local councils (44%) all came below utilities companies in terms of public ire.'¹⁶
- 2015: 'People were asked to pick which two or three villains from a 'rogue's gallery' of businesses they most disliked, and 46% picked gas and electricity suppliers – more than any other sector.'¹⁷
- 2015: Customer ratings of energy companies put all Big 6 suppliers at or near the bottom of the rankings.¹⁸
- 2016: Internationally, only South Africans have greater contempt for their energy companies.¹⁹

Figure 3. Energy industry favourability vs. average industry favourability. Source: Ipsos MORI.¹⁹



In theory, energy suppliers should have strong incentives to deliver high quality customer experience, since they face competitors that offer an identical product. The problem is that customers are so disengaged from the market that few consider switching supplier – 34% of people have never even considered switching supplier.²⁰ In this environment, energy companies can deliver poor service with little consequence for their profits. Dissatisfaction with energy companies fuels distrust and may cause further disengagement.

Lack of transparency and accountability

Electricity and gas systems are extremely complicated and made even more so by the opaque ecology of corporate entities that own, control, and profit from different elements of them. This has created a situation in which there is little public knowledge about the ownership of our energy system and virtually no debate about whether the current arrangement is in the public interest.

For example, London's District Network Operator (the body that owns and maintains the local grid infrastructure), a company called UK Power Networks,²¹ made nearly £300 million of profit in 2013 (a 62% gross profit margin and about £35 for each Londoner),²² ultimately extracted from bill-payers and accruing to its parent company Cheung Kong Infrastructure Holdings based in Hong Kong.²³ As already discussed, such profits are a predictable consequence of incentivising private utilities to keep operating costs low, but nonetheless public consent for such arrangements is surely bolstered by a general lack of awareness.

In summary, London's energy supply market, as part of the wider privatised energy system, is failing to deliver affordable bills and mitigate fuel poverty, procrastinating over the necessary transition to clean energy, and engendering high levels of disengagement and mistrust.

Based on this evidence, there is a compelling case to consider new models of energy supply that will contribute to the following objectives:

- Eliminate fuel poverty
- Fully decarbonise the generation of energy
- Make energy supply democratic and responsive to the needs and demands of users, workers, and citizens

2. Why municipal energy?

Solutions to energy provision can be placed on many spectra – monopolistic to competitive, national to local, public to private – but the dominant discourse tends to accept only two possibilities: the free market status quo or a single centrally nationalised provider. This is a false dichotomy and there are other promising models we should consider.

This report focuses on municipal energy as an alternative to the current system of energy supply. This section highlights a non-exhaustive set of reasons to prefer this type of solution to the other major types of energy system – a fully privatised market (the status quo) or a centrally nationalised organisation. There are at least four reasons to prefer municipal energy at the current moment.

- **Better able to achieve social and environmental objectives.** Compared to a profit-seeking company, which must be tightly regulated and incentivised to deliver public goods, the public nature of municipal energy solutions allows the public interest to be built in to the very purpose of the energy supply model.
- **Practically possible right now.** This is a pragmatic option – no new laws or regulations are required. Municipal energy solutions can be set up relatively quickly and start making a difference sooner rather than later.
- **Boost local economies.** Regional solutions can make use of regional resources – labour, buildings, services – that might not be employed by a centrally governed private or public energy company. Municipal energy may also create or leverage new sources of finance for local government to invest in public services and infrastructure at a time that grants from central government are rapidly disappearing.
- **Closer to people and their communities.** Unlike a centrally controlled public energy system, local solutions will have decision-making processes that are closer to the people affected by them. This can foster greater accountability and trust.

For these reasons, this report focuses on the potential for municipal energy solutions to achieve the objectives set out in the previous section. The following section assesses some of the most promising options available in terms of municipal energy models.

3. Assessing the options

A number of reports have recently set out the various options that are available for local and municipal regions to take more control over their energy.^{24–26} These range from establishing a fully licensed supplier to a ‘white label’ partnership with an established provider, with varying degrees of complexity, cost and autonomy.

For London in particular, there are three main options to be considered: Licence Lite, public-private partnership, and fully licensed supply.

Licence Lite

In 2009 the energy regulator Ofgem announced a new regulatory innovation called Licence Lite that was intended to aid the entry of small new suppliers into the market. It involves a new supplier, which may or may not have its own generating assets, that teams up with an existing licensed supplier so as to avoid a number of regulatory costs and requirements that could be onerous for a small organisation.

The GLA is currently pursuing this option, though it is the only current applicant for Licence Lite and has taken many years to get where it is in the process. The arrangement will involve the GLA purchasing heat and power from public bodies and boroughs and selling it to Transport for London (TfL) while relying on its partner, Npower, to ensure that the operations comply with energy regulations. The electricity would power TfL’s offices and traffic lights – not the tube network.

It is not clear that this arrangement would have any substantial impact on the problems outlined in the previous section. Most importantly, the plans do not currently include an extension of the supply to London households. Londoners may benefit from a lower energy bill for TfL in the form of marginally lower transport costs, but this will have no effect on the unacceptable levels of fuel poverty and dire customer experience. Neither will this scheme tackle the opaque corporate complexity of the system.

Its greatest potential lies in enabling an expansion of clean energy production in the city. In theory, the GLA will be able to offer local clean energy schemes a better price for their energy generation compared to other suppliers (because of some avoided regulatory and transmission costs) – the Mayor’s Office expects this to incentivise more of these clean generation projects. However, this does rely on private sector investors responding to this incentive and does not overcome other barriers to investment, including private sector risk aversion and difficulties in planning and development.²⁷

Moreover, the key advantage claimed for Licence Lite – its simplicity – does not seem to have materialised. The GLA has been in the process of establishing a Licence Lite regime for nearly three years. In the meantime, at least two other cities have obtained a full supply licence.

A report for Bristol Council concluded that ‘this option [Licence Lite] is not seen as being viable for Bristol Energy, as does not [sic] appear to offer any advantages over the “fully licensed supply” route, yet would require Bristol Energy to work with what is essentially a rival energy company.’²⁸ The Association for Public Service Excellence has also raised concerns that the Licence Lite model is not cost effective for municipalities.²⁹

Public-private partnership

Licence Lite is a form of public-private partnership: it involves collaboration between local government and private energy companies. However, there are many other forms of energy supply based on a partnership between public and private sectors.

For example, the energy company OVO (not one of the Big 6 suppliers, but rapidly increasing in size) has set up a project called OVO Communities that will involve selling OVO’s regulatory and market expertise to groups that want to supply energy locally. The local group would be using OVO’s supply license, its trading teams, and its billing system.

The arrangement works on a ‘cost-plus’ basis, which means that OVO asks for a fee that covers the costs it incurs plus some percentage profit.³⁰ There is relatively little information on how this works in detail; for example, how is the percentage mark-up determined? And what incentivises OVO to keep costs low?

It is clear that a partnership such as OVO Communities could bring some notable improvements over the fully privatised status quo. For example, it could support local supply and give more local control over energy pricing policy. Equally, at some levels and for some communities, contracting the expertise and competence of an existing supplier may be an unavoidable choice. On the other hand, partnering with a private sector organisation inevitably preserves a role for profit making as a motivation for providing services. The economic consequences of this are contested,³¹ but we must also consider the social implications. A new public company will attract customers only by legitimately claiming to be trustworthy and focused on objectives other than profit making. There is, therefore, an extent to which partnerships with private supply companies could undermine the ability of new public initiatives to attract and retain customers.

Nottingham City Council considered setting up a White Label partnership (such as OVO Communities) but dismissed it on the basis that the jobs created would not be in Nottingham. Instead they opted for a fully licensed company.

In the future, there may be possibilities for smaller communities to enter into partnerships with new fully licensed public energy companies – a public-public partnership.

Fully licensed supply

The other option worth detailed consideration is for the GLA to obtain a full licence to supply energy, just like any other major energy company must have. As has been described by many others, there are a number of advantages to this option.

- In the long term, the full revenues associated with selling energy will accrue to the GLA, rather than being shared with an established energy company. These revenues will initially be used to recoup set-up costs, but thereafter will provide **a new source of funds for the GLA** to use in the public interest.
- The GLA will have full discretion to determine the structure of tariffs. This tool can be used to **establish social tariffs**, contributing to the eradication of fuel poverty and disincentivising excessive energy use. This discretion will, of course, be constrained in some ways, for example by the need to ensure costs are covered; however, the full licence option gives maximum possible control.
- Having a full licence also gives the GLA the possibility of significantly **reducing London's carbon emissions** by offering more competitive prices to renewable schemes (as under the Licence Lite scheme), and creating or leveraging new financing opportunities for investment in new generation or energy efficiency measures.

The key disadvantage to this option is the significant cost and complexity of setting up a new company and complying with all relevant regulations. These factors should not be underestimated; however, recent experience with Licence Lite and fully licensed municipal projects in other UK cities casts some doubt as to the relative complexity. A survey of local authorities found that a more important barrier is the uncertainty created by current central government energy policy.³²

The following section explores some existing examples of fully licensed public suppliers in order to understand the extent of these pros and cons in practice.

4. Existing fully licensed supply initiatives

Nottingham: Robin Hood Energy

Company objectives

The over-riding motivation for setting up a municipal energy company in Nottingham, which started operating in late 2015, was clearly to reduce bills in the city. The company's website puts this simply: 'Our mission is to provide low cost energy to all households. No private shareholders. No director bonuses. Just low and competitive energy tariffs.'³³

The decision was taken to limit the company's objectives to focus on social justice due to the concern that any other objectives (e.g. sustainability) might conflict or distract from reducing fuel poverty and providing an ethical approach to dealing with vulnerable customers. Subject to this main concern, a second priority for the company is to create jobs in the local area. Arguably, the need to limit the number of objectives is a question of capacity, rather than any inherent incompatibility with other social or environmental goals.

Governance and democracy

Robin Hood Energy is a private limited company wholly owned by Nottingham City Council, with a Board consisting of just three people – all three are Nottingham councillors appointed at the discretion of the Council. The head of Robin Hood Energy reports directly to the head of Energy Services department at the council and the councillor responsible for energy issues chairs the Board. From deciding to take on the project to the beginning of market operations, the whole process took two years. This was quite fast, though the council already had some experience with energy services.

The company is now thinking about how it can partner with and support other councils and public sector organisations – public-public partnerships – to spread the benefits of its experience.

Financing

The set-up cost for Robin Hood Energy was between £1 and 2 million and was provided as a loan to the company from Nottingham City Council (on commercial terms, to be compliant with State Aid rules).

Since the company does not have a mandate to invest in clean energy sources, as explained, the finance required has been limited to the relatively small amount needed for setting up the company.

Delivering fair prices

Being able to offer lower energy prices is Robin Hood Energy's prime purpose, and there are a number of ways in which it is made possible:

- Board members are not remunerated for their roles.
- Many costs, such as sponsorship deals and advertising, are avoided.
- The company does not pay comparison sites.

- Operations are lean and synergies with other council functions are exploited, such as using council legal staff to support the company.
- Being non-profit, there is no need to pay dividends.

Robin Hood Energy now offers one of the cheapest tariffs on the market – customers could save £265 per year by switching.³⁴ The company has also led other companies to offer lower tariffs in the region. Tariffs are as much as £78 cheaper in East Midlands compared to when Robin Hood Energy launched.³⁵

The company also offers a special lower tariff for customers with a Nottingham postcode (who account for around a quarter of its customer base), reflecting the local element of its mission and branding.

Overall, Robin Hood Energy provides us with important evidence that council-run energy supply is feasible and really can deliver significantly lower energy bills. On the other hand, its environmental remit is limited and there are few genuinely democratic or participative elements to its governance.

Bristol: Bristol Energy

Company objectives

Bristol Energy, which started operating in early 2016, has been set up with clear and explicit objectives in mind, as set out by Bristol City Council:

'Bristol Energy will have a mission to deliver reduced social inequality, improved environmental performance and sustainable economic prosperity. These core objectives will be achieved by, amongst other things:

- focusing on locally generated, low carbon energy, with a mission to be the most environmentally conscious and trusted local energy supplier;
- providing a fairer deal for households currently on prepayment meters;
- supporting community investment in renewable and low carbon projects;
- developing district heating, electrical distribution and broadband/digital networks; and
- protecting the city's critical infrastructure, thereby improving energy security and resilience.'³⁶

Governance and democracy

Bristol Energy is a private company fully owned by one shareholder – Bristol City Council. The Mayor of Bristol is the representative of the shareholder and is advised by a Shareholder Group that meets twice a year and is composed of the Mayor, a number of elected city councillors, and up to two independent advisors with expertise in finance or ethics.³⁶

In addition, the company has a Board of Executive and Non-Executive Directors that meets each month, including senior managers in the company and independent experts.

The company proposals discuss a tension between democratic control of the company and commercial freedom. In the governance model chosen, more weight is given to commercial freedom – democratic control enters through elected councillors who meet twice a year and advise the Mayor. These elected councillors can help to set strategic objectives and direction but have limited input on operational details, including pricing policy. In a recent interview Bristol Energy's Managing Director emphasised the company's separation from the council.³⁷

Recommendations on the governance of the company also note that in the future it would be possible for the ownership shares of the company to be transferred from the council to Bristol's citizens, or equally could be sold on the stock market (i.e., privatised).³⁶ In such cases the company would become subject to the objectives of the new shareholders rather than those of Bristol City Council.

Financing

The costs of setting up Bristol Energy, including staff time, preparation, and market entry, were around £3 million, less than 1% of the council's annual spending budget.³⁸ EU funding of £2.5 million was received that contributed towards set-up costs,³⁹ and funding was also loaned to the company from the council's reserves on a commercial basis.³⁶

The council's business plan predicts a return on investment of 12% after five years and 35% after 10 years,³⁶ amounting to an average annualised return of 2.3-3.0%. It is not meaningful to compare this return to other potential investments since any investment decision must balance return and project risk. Moreover, the return is forecasted, not pre-determined.

There is also a suggestion that the council may set up a 'sovereign wealth trust' using the proceeds from the company, though the idea has not been fully developed.³⁶

Delivering fair prices

Social justice is an explicit motivation for the set-up of Bristol Energy and a company spokesperson claims that consumer bills could be £276 lower⁴⁰ (a saving of nearly a quarter compared to the average⁴¹); on the other hand, generating revenue for the council was also a motivation – any profits will be returned to the council without ring-fencing for a particular purpose. The proposals for the company acknowledge this tension:

The shareholder and the rationale for establishing the company would be for tariffs to be set especially for the poorest and most vulnerable at the lowest level, yet another rationale for establishing Bristol Energy was to generate profits that could be returned to the council so that it can maintain and improve the services to the most vulnerable and poorest in society.³⁶

It is not clear to what extent the company will explicitly prioritise one objective over another.

There has been no suggestion that the company might operate different forms of social tariff, such as increasing bloc pricing.

Overall, Bristol Energy provides further confidence in the ability of city councils to obtain and operate a full supply licence. The company also contributes some important thinking on how it can contribute to more local clean power generation, particularly through supporting community energy schemes.

Scotland: Our Power

Company objectives

Our Power was set up in 2015 and, according to a report for Edinburgh City Council's Health, Social Care and Housing Committee, its main objective is 'to tackle fuel poverty through the supply of affordable and renewable energy to social housing tenants. Social housing tenants will be the core customers of the company'. The company's website also emphasises the social justice aspect of its mission.⁴² At the same time, it has a target of buying a minimum of 30% of its energy from renewable sources,⁴³ and ultimately to be investing directly in clean energy generation.

Governance and democracy

A CBS, also called Our Power, has been set up. This is a type of organisation whose profits are required to be distributed to the community, rather than to individual members or to shareholders. Its members are mostly housing associations but also some local authorities and other community-controlled organisations. Our Power Energy is a wholly owned subsidiary company of the CBS with a Board comprised of members of the CBS.

The company has an 'asset lock' provision which legally prevents any of the its assets being transferred to private interests – they can only be transferred to other community-interest entities.⁴⁴

Decisions and strategy will be determined, therefore, by the Board of the company, who will also have to judge what is in the interest of the community it represents. In contrast to other models, therefore, the potential for direct participation by energy consumers is fairly limited.

Financing

The project received two repayable loans: £2.5 million from the Scottish government and £1 million from Social Investment Scotland (a fund that is mostly capitalised by major UK banks).⁴⁵

Our Power sources indicate that the company intends to break even by year 3 or 4.⁴⁶

The business model of Our Power might be considered more secure compared to the other examples discussed because it already has a large number of social landlords that have committed to switch to the company. Councils that become members of the CBS will switch their default provider to Our Power, rather than one of the Big 6 (e.g. Edinburgh Council homes currently default to the big 6 energy supplier SSE when the home becomes vacant).⁴³

Delivering fair prices

Various sources report that the company will be able to offer tariffs that are £100 (or about a tenth) cheaper than average, though there is no explanation

of how these savings are achieved – presumably just the same as other new companies.

Overall, Our Power provides an interesting example of an alternative governance model, compared to Nottingham and Bristol, and the possibility of a much broader geographical scope. On the other hand, its environmental ambitions seem narrow.

Berlin: Berliner Energietisch

Berlin's campaign for public energy supply and distribution differs from the UK examples in that it was a consciously political grassroots movement concerned with achieving a highly participatory method of energy system management.⁴⁷ It also differs from the previous examples given in that it was ultimately unsuccessful; despite 83% of Berliners approving the plan in a 2013 referendum, the voter turnout was slightly too low to validate the result.

Furthermore, had the campaign been successful, the new public company would have become a regional public monopoly – this is not an immediate possibility for a new public company in London since there are already a number of private companies in the energy supply market. This has implications that will be explored later.

Nevertheless, we can take some inspiration from the principles the campaign developed.

Company objectives

The campaign website articulates its overall objective: 'a more ecological, social and democratic energy supply in Germany's capital'.⁴⁸

Governance and democracy

The governance arrangements of the proposed company were clearly detailed by campaigners and comprised the following key elements:

- A Board of directors would be made up of one-third local politicians, one-third company employees, and one-third directly elected citizens.
- Citizens would be able to force the Board to consider proposals by collecting a sufficient number of signatures.
- Regional assemblies would be convened in different parts of Berlin to play an advisory role to the company.
- An ombudsman would act as an appeal body and advocate for consumers.
- The company's operations would be fully transparent.^{49,50}

This form of governance took some inspiration from Sacramento, California, where managers of the local utility provider are elected by citizens.⁴⁷ Some of these principles, such as full transparency, may restrict the commercial freedom of a company that must compete with others – this was the concern explicitly raised in the process of setting up Bristol Energy.

Notably, the campaign also proposed guaranteeing jobs for private sector

workers that would be affected by the remunicipalisation of the energy system, showing an awareness of wider issues of justice.⁵¹

Financing

The local Berlin government would fund the purchase of the energy network and a key function of the company would then be to both directly invest and indirectly facilitate investment in renewable generation.⁵² It is not clear whether this would have been financed primarily through revenues received, debt issuance, or directly from government budgets.

Delivering fair prices

Although the legal context precluded formally adopting social tariffs in the proposal, reducing fuel poverty was nonetheless a key objective and message of the campaign.⁵¹

Overall the Berlin campaign is an inspiring example of citizen engagement and grassroots organising, with a demand that is comprehensive and radical. It could provide a model for other large cities, though we must bear in mind that the proposal was never implemented.

Comparison of project aims

Many of these projects are in very early phases, so fully evaluating their impacts is not realistic. On the other hand, we can evaluate the extent to which the proposals integrate the factors we consider most important. Table 1 assesses the extent to which each of the projects discussed aligns with the objectives set out at the beginning of this report.

- Green indicates that the objective is a clear and integral part of the project.
- Orange indicates that it is important but not central.
- Pink indicates it is not mentioned or not significant.

This assessment is not made in order to pass judgement on the validity of prioritising different objectives, but rather to understand which model most closely aligns with the objectives advocated.

Table 1. Comparison of existing municipal energy projects' aims.

	Nottingham	Bristol	Scotland	Berlin
Eliminate fuel poverty				
Fully decarbonise the generation of energy				
Make energy supply democratic and responsive to the needs and demands of users, workers and citizens				

5. What should London's company look like?

The following section describes some of the ideal components of a public energy company for London. However, some practical elements depend on a question that this report can only partially answer: Can a socially progressive and democratic company compete effectively in a privatised market? The answer to this question has implications for whether or not the ideal model described can be implemented relatively immediately or only as the end-point of a managed transition in the entire market.

Governance and democracy

Two main models of ownership should be considered.

1. A company fully owned by the GLA

This is the model followed by Bristol and Nottingham city councils, as previously described. Such a company would be bound to serve the interests of its shareholders, which in this case would be the GLA only. The GLA would be free to use the assets and profits of the company as it wishes and could transfer its shares to other entities.

2. A company owned by a community benefit society with the GLA and London boroughs as members

This is the model followed by Our Power in Scotland. Unlike a cooperative, whose purpose is to serve its members, a CBS is bound to serve the community more widely. A CBS cannot distribute profits directly to members and must reinvest any surplus in the function of the business or in the interest of the community. If the CBS chooses to have an asset lock, then its assets cannot be transferred to purely profit-making interests.⁵³

The latter option may be more suited to achieve the objective of democratic and participative governance, but would be somewhat more complicated since it requires the set up of a CBS as well as a new company.

The GLA should seek to learn from the relevant experiences elsewhere and, where possible, solicit advice directly from project managers in Bristol,

Nottingham, and Scotland. Much of the path-breaking thinking has been done by others and need not be replicated.

Regardless of the legal form adopted, some common principles can and should be applied.

To the maximum possible extent, those affected by company decisions should take part in decision-making processes. The company Board should include representatives from the GLA and local government, the company's employees, and the company's customers. Each of these representatives could be elected by their peers, though some effort may be necessary to maximise participation and engagement, at least initially.

The Board and employees should agree on a pay ratio that will apply between the highest and lowest earners. The London Living Wage should apply as an absolute minimum. The evidence shows that lower levels of inequality and a greater feeling of control contribute to higher wellbeing, which in turn positively affects productivity and performance.⁵⁴

The company should also consider options for direct citizen involvement. For example, the Berliner Energietisch model advocated establishing a formal advisory role for regional assemblies. Each London borough or a grouping of boroughs could convene a regular assembly where Board members can listen to local issues and be held to account. There should be a requirement to consider and act on this advice to ensure that participation is meaningful and worthwhile. The energy cooperative Som Energia in Catalonia, Spain, has pioneered digital participative methods, including online attendance at the cooperative's annual general assembly and elections. These methods could be applied in London to facilitate greater participation. Establishing strong channels for communication with customers is surely sound business, regardless of its intrinsic merit.

More inclusive and participatory methods of governance could contribute to greater popular engagement with issues of energy and climate change. In Berlin, and in Germany more widely, grassroots campaigns and methods of popular control over energy systems are credited with catalysing a greater political awareness and sense of agency among citizens.^{47,51,55} This is supported by econometric evidence showing that people positively value democratic or community control of energy.^{56,57}

On the other hand there is a legitimate critique concerning the extent to which total transparency and participative decision-making processes could disadvantage a public company relative to the wider privatised supply market. Disclosing so much information (without reciprocation) allows competitors to anticipate and pre-empt action taken by the public company. The severity of this trade-off will depend on how directly a public company competes with private suppliers – for example, to the extent that a public company would be marketing itself primarily on characteristics such as localism, social justice, and sustainability, which are not as prominent in the branding of Big 6 suppliers, the products may be sufficiently differentiated that intense competition is avoided. Robin Hood Energy in Nottingham has deliberately cultivated such differentiation with a focus on localism.

Financing

The finance required to set up an energy company is small, certainly in comparison to the GLA's annual budget, and is likely to be recovered in only a few years. If it is provided from the GLA's budget it will have to be made as a loan under commercial rates due to State Aid requirements.

The more challenging question is how to source the financing for the substantial investments it is hoped that city energy companies can make in energy efficiency and renewable generation. The existing fully licensed supply initiatives described earlier have not publicly answered this question (though in some cases it was never part of their plan). Financing options for investment in city energy have been outlined elsewhere,²⁵ and include municipal bonds and pension fund investment.

The funding strategy for London's Crossrail project demonstrates that large sums of financing can be found when the need is considered important. That project made use of municipal bonds (debt issued by the GLA – the first of its kind for 17 years),⁵⁸ as well as a supplementary tax on businesses in London.⁵⁹

The particular nature of a project, such as the company proposed in this report, is that the returns on investment may be substantially comprised of social and environmental benefits, rather than purely financial. The project will create a steady stream of revenues through selling energy, but this is not the main motivation. This has implications for the type of financing that is most appropriate. For example, investors seeking high, short-term rates of return are unlikely to deem this project attractive. On the other hand, investors looking for stable, long-term returns (e.g. pension funds), or investors who are deliberately seeking social or environmental returns (e.g. government and public sector organisations) will find it attractive.

The potential role of pension funds for financing long-term investment should be emphasised. In particular, an increasingly compelling argument is being made by divestment movements around the world for the reallocation of public institutions' pension funds from equity shares in fossil fuel companies (which have performed poorly in recent times)⁶⁰ towards more reliable and socially beneficial investments.⁶¹ As others have argued, it is essential to link the argument for divestment to the case for reinvestment.⁶² By some estimates, the London Pension Fund Authority could reinvest £37 million in this way.⁶³

A crucial question then is how to use these funds. There are a number of competing claims on how such financing could be most usefully employed, including:

- **Direct investment in clean generating capacity.** A new London energy company could act as a vehicle for long-term financing of solar, wind, and other renewable generating technologies in London or more widely (since some of the most promising sites may be elsewhere in the country).
- **Direct investment in insulating homes.** The UK's housing stock is among the most energy inefficient of all rich nations.⁶⁴ This is a key cause of fuel

poverty and of energy-related carbon emissions. A new London energy company could be a vehicle for financing home insulation by loans or grants.

- **Supporting renewable projects in the city.** At a time when national policy is unfavourable to renewables in general, and to small-scale renewables in particular, a new London energy company could replace this vital support to households, businesses, or community groups that install renewable capacity. This could take the form of a London Feed-in Tariff or agreements to purchase the energy generated at a reasonable price.

A recent Greenpeace report advocates that the next Mayor of London should implement an ambitious solar strategy for London.¹³ This suggests many of the financing mechanisms mentioned in this report, including issuing bonds and reinvesting the London Pension Fund Authority. Establishing a new London energy company could complement this policy by creating a socially motivated outlet for the energy produced and acting as a co-ordinating centre for the overall municipal energy strategy and a repository of expertise.

Investing in insulation and clean energy generation does not necessarily require a municipal energy company; or does having a municipal energy company necessarily require investing in insulation and clean energy generation. However, there are clear motivations for both and there are surely synergies that can be exploited, not least the direct connection between generation and supply.

Delivering fair prices

There are a number of reasons to expect that a municipal energy company would be able to offer a fairer pricing system compared to the Big 6 energy suppliers.

No extortionate profits or executive pay

Surplus revenues would not be an objective in itself for this company, therefore eliminating the motive to set prices at the highest possible level compatible with competitive and political pressures.

Lower network costs

A report proposing the set up of a municipal energy company prepared for a Bristol Council cabinet meeting argues local distribution will lead to lower prices:

At the core of Bristol Energy's approach is the desire to procure electricity from local assets that are owned by the council and from other local stakeholders. The electricity produced by these assets is moved across the local distribution network to end consumers, avoiding the need to bring in electricity from the national transmission system. As a result, some industry costs can be avoided and these savings can be passed on to consumers as lower prices and/or higher electricity purchase prices for generators. Consequently, Bristol Energy should be able to offer savings to its customers and better returns to local generators compared to the wider market.²⁸

This provides strong motivation for connecting investment in and support for local renewable generation to the set up of a local supply company.

Freedom to determine tariff structure

A municipal energy company with a full licence would have many choices as to how energy tariffs should be structured. For example, it might prioritise offering the lowest prices to London residents, as Robin Hood Energy has done. It might also choose to offer new social tariffs in which a basic amount of energy is priced at a highly affordable level and any subsequent usage is priced much higher – also known as progressive bloc pricing. This would predominately benefit poorer households with lower energy consumption, though safeguards would have to ensure that poorer households with high consumption (perhaps due to housing characteristics) are not penalised.

However, some constraints on pricing policy can be anticipated. To a certain degree many desirable pricing strategies are redistributive in nature and involve cross-subsidisation of poorer households by richer households. Since any new company would, at least in the near-term, have to compete in a private market for customers, any pricing policy will have to attract both rich and poor. On the other hand, effort will be required to ensure that it is not just well-informed consumers who exploit the opportunity to switch to a new supplier. In Nottingham, where Robin Hood Energy applies an across-the-board reduced price in the city, it was found that households in more affluent areas were more likely to switch to the new company.

Some experimentation may be required over time. The range of new fully licensed municipal energy projects in the UK will eventually provide a variety of transferable lessons on how to price energy to further the objective of eliminating fuel poverty.

Interaction with community projects

It is important that any new municipal project does not become a substitute for community-driven energy initiatives. A London energy company should seek to support and catalyse the natural drive of many London communities to control their own power.

One of the stated strategic objectives of Bristol Energy is to use it ‘as a vehicle to route power from existing and planned Council-owned and community owned low-carbon generation assets to consumers’.²⁸ However, this seems to be a longer-term aspiration and no further details have been made public at the moment.

London’s energy company could augment community energy projects in many ways:

- As described, financial support either through a London Feed-in Tariff or long-term energy purchase agreements would give community projects much greater security and potentially avoid some transmission and distribution costs.
- The company could act as a source of London-specific guidance on issues relating to legal, regulatory, and planning requirements, and could develop a funding pot for helping community projects to get started. Various community energy projects already exist in London, but many more could flourish with the right support.

Structural reforms to the UK energy supply sector

The preceding sections have been concerned with the specific challenges and opportunities for new models of energy supply in London; however, there is a further question about how this specific vision fits in to wider long-term changes in the UK's energy system. In particular, there are questions about the interactions that new public energy companies will have with each other and with remaining private companies and the long-term nature of the energy supply market itself.

Many new public and municipal energy companies are emerging and expected to emerge over the coming years. While it is common to think of such companies as essentially regional, they are not. In the current situation, companies like Bristol Energy and Robin Hood Energy have to supply to anyone in the country; indeed, around half of Robin Hood Energy's customers are apparently not residents of the East Midlands (which contains Nottingham), although it is possible to use pricing models that do discriminate by region. The more municipal suppliers that enter the market, the smaller the pool of non-local customers for each, therefore limiting potential revenue (at least compared to what Nottingham has achieved).

We might therefore be concerned that, rather than establishing a more localised and socially oriented energy supply market, the current trend could in fact merely lead to a hyper-competitive national market. Such a market may certainly be an improvement on the current oligopoly, but it might not be quite the systemic transformation that many believe we need.

These concerns may be unwarranted. Local public procurement may combine with regional pricing models to create markets that do in fact align more closely with local economies. However, certain reforms could help to catalyse more systemic change, including removing barriers to local supply markets, for example by enabling local balancing units^{65,66} and allowing generators to sell directly to local consumers.⁶⁷ It might also make sense for municipal companies to find ways to work together in the public interest and avoid a damaging race to the bottom in social and environmental standards in competition for customers. A more regionalised model of energy supply will also raise issues around financing the maintenance and upgrade of the national grid, which will remain a crucial asset.

We must also consider whether preserving a role for private profit-making energy suppliers serves the public interest in the long term. As already noted, the existence of private suppliers places some limits on the opportunities for redistributive pricing policies – some will consider this a disadvantage, others an advantage. However, there is now a strong case to be made that the privatised oligopoly that has survived for so long now has not resulted in greatly increased customer experience, or significant benefits to the environment or social justice. We might consider, for example, a system of 'social licensing' that makes the right to trade contingent on certain social and environmental targets, thereby building some of the objectives of municipal companies into the business model of private companies.⁶⁸ Alternatively, the government may adopt a general strategy of re-municipalisation of energy supply over the long term, phasing out private supply altogether.

6. What would London's company achieve?

This report has advocated establishing a new municipal energy company in London with three core objectives but to what extent could we expect these to be achieved?



Eliminate fuel poverty

If the company could reduce bills to the same extent as Robin Hood Energy has done using a special local tariff, then Londoners who switch to the new company could save around £265 on their annual bill.³⁴

The average fuel poverty gap in London – the amount by which a household's energy bill would have to fall to take them out of fuel poverty – is £304.⁵ It is likely that the distribution of the fuel poverty gap is skewed (i.e., a small number of extreme cases inflate the average) so that a saving of £265 could lift a large proportion, perhaps as much as 50%, of fuel-poor Londoners out of that category. That is only in the short term: if the company is successful in catalysing investment in insulation, the effect could be even more dramatic in the long term.



Fully decarbonise the generation of energy

If the company helped to catalyse a tenfold increase in London's solar capacity, as advocated by Greenpeace, or if an even greater proportion of the estimated technical potential was realised, then a significant proportion of London's electricity needs would be decarbonised, potentially as much as 20%.¹³

On top of that, the company could contribute to emissions reductions by investing in energy efficiency measures that reduce the required consumption of energy in households. In the long term, the company could drive systemic change in London and more widely by mainstreaming consciousness of the environmental impacts of energy use and acting as an agent and advocate for structural change.



Make energy supply responsive to the needs and demands of users, workers, and citizens

If the company could adopt a truly democratic approach to energy governance then it could transform engagement with energy and climate change, re-vitalise local political action, and inspire other areas of the UK to take up action.

Grassroots city energy campaigns and unprecedented citizen engagement with energy issues in Germany, where citizen-, community-, and municipality-owned energy is prevalent, demonstrate the potential of enfranchising people with new forms of energy ownership.

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With thanks to: James Angel, Mika Minio-Paluello, Laura Hill, Jo Ram,
Archie Davies, Adrian Bua, Olivier Vardakoulis, David Powell, Gemma Wearing,
Emilia Melville

This research was made possible by the generous support of Oak Foundation

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Registered charity number 1055254
© April 2016 New Economics Foundation
ISBN - 978-1-908506-95-5



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