



# Microgeneration in the capital

An investigation into the drivers and barriers facing the London industry



energy saving trust<sup>®</sup>

# Foreword

The recently introduced Feed-in Tariffs (FITs) and proposed Renewable Heat Incentive (RHI) provide London's citizens with an excellent opportunity to generate their own energy and benefit from increased financial incentives. Both policies are expected to revolutionise the market, providing the necessary stimulus to bring microgeneration technologies in line with the mass consumer market, ensuring a cost effective and reliable source of energy production.

Yet despite these significant market developments, the London microgeneration sector has remained a neglected market compared to other parts of the UK. Practical issues such as congestion charging, traffic, parking and access to properties have steered installers away from the capital. Consequently, there is a current shortfall of qualified technicians who are expected to deliver on the demand generated through the FITs and RHI.

To help resolve this issue, the Energy Saving Trust is looking to work closely with installers, local government and other stakeholders, to address the barriers that are preventing increased uptake of microgeneration technologies. **The purpose of this report is therefore:**

- 1 To provide an assessment of the current microgeneration market in London.
- 2 To provide a better understanding and raise awareness of the key issues that affect installers who work in the capital.
- 3 To identify ways in which the Energy Saving Trust can work more effectively with installers (both current and potential) to help overcome the market barriers and ensure a more attractive and equitable market environment.
- 4 To highlight the market potential to individuals who are considering a future within the industry.

As a step towards achieving the above, the Energy Saving Trust has conducted a number of interviews with installers and other key stakeholder organisations that play an active role within the London sector. The results of these findings, which lead to some key industry recommendations, are detailed within this report.



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## Executive summary

Little is known about the issues that currently constrain the growth of London's domestic microgeneration market. The Energy Saving Trust has therefore undertaken an extensive qualitative investigation to identify current market failures and provide industry recommendations for installers, policy makers and local authorities.

### Key findings

#### Planning

- A degree of installer uncertainty surrounding the criteria for which an installation would qualify as "permitted development"
- For fear of becoming embroiled in costly and protracted planning applications, both installers and consumers have reported a pronounced feeling of scepticism and reluctance to complete the necessary paperwork required by local planning authorities
- A high drop out rate from consumers when notified that planning permission was required
- Prohibitive planning application costs were reported to be dissuading homeowners from installing microgeneration technologies.

#### Local authority planning staff

- Inconsistency in the level and type of information required by planning control officers for submitted applications
- Lack of skills, understanding and awareness amongst front line local authority planning staff on the application of planning laws for domestic retrofit installations
- Planning officers were reported to be more experienced at processing applications for large scale commercial new build projects, rather than domestic retrofit installs at the microgeneration scale<sup>1</sup>
- There was a reported tendency for installers to focus business opportunities in boroughs which were considered to have "pro renewable" planning staff.

#### Building control

- Lack of guidance for microgeneration installers surrounding what type(s) of work are deemed "notifiable" under current legislation outlined in the Building Regulations from Part A to Part P

- Installer malpractice – businesses cutting costs and undercutting competitors by not notifying Building Control for works where there is a recognised need to
- Inconsistent information fed from local authority Building Control staff on the type(s) of work for each microgeneration technology that require Building Control notification.

#### Sector growth

- There is currently a relatively low number of MCS certificated installers based in London compared with the South-East<sup>2</sup>
- From 2006–2010 the Low Carbon Buildings Programme had failed to stimulate long term industry growth within London
- Recent market entrants had criticised the emergence of pre-approved installer lists affiliated with local authority grant or managing agent schemes. Installers felt that such schemes limited outside competition, provided little in the way of incentivising installer standards, reduced the range of available product types on the market and exposed consumers to higher installation costs
- Feedback from installers reported a number of concerns about the quality of training provision in microgeneration technologies. Installers felt that training tended to be manufacture led, rather than providing a complete overview of the range of systems types for each technology set
- Installer inability to remain independent within the sector and free to install across a range of system and product types.

#### Marketing and communication

- Many of the previous Government grant schemes that provided financial assistance towards the installations of microgeneration technologies had been criticised for being poorly communicated to the public, leading to what many felt as a missed business opportunity
- Given London's competitive and congested market environment, a number of recent market entrants had reported the difficulty in raising their company profile within the local community, forcing businesses to focus their activities more towards the South-East

<sup>1</sup> The Energy Act 2004, Section 82 defines microgeneration as the generation of energy of up to 45 kW (heat) or up to 50 kW (electricity). The term "microgeneration" also covers low and zero carbon technologies

<sup>2</sup> The Microgeneration Certification Scheme (MCS) is an independent scheme that certifies microgeneration products and installers in accordance with consistent standards

- Installers reported a high level of consumer misconception surrounding the feasibility and application of microgeneration technologies
- Low level of consumer awareness relating to the Feed-in Tariffs.

### Microgeneration Certification Scheme

- Lack of Installer awareness surrounding the MCS scheme, what it is and where to go for the relevant training
- Smaller sized companies have tended to struggle with the necessary quality management procedures exacted by the MCS process
- Confusion surrounding the qualification requirements to pass MCS inspection.

### Skills and training

- Difficulties faced by installation companies to recruit the necessary skills and experience required to expand their business
- Concerns over the quality of installed work for commissioned systems that had been subcontracted out by an MCS certificated company
- A lack of renewable energy training courses available in London
- Installer uncertainty surrounding the identification of training courses that have been industry approved, and where to access training
- Little support from public bodies to support the capital costs to initiate new courses in microgeneration technologies.

To help address the above issues the Energy Saving Trust has outlined a number of industry recommendations that are intended to support the London market. These are outlined in chapter three of the report.



# Chapter 1

## London’s microgeneration market to date

Prior to the introduction of the FITs, the UK market principally relied upon the Government backed Low Carbon Buildings Programme (LCBP) grant scheme to help support the sector. Launched in 2006, the scheme ensured financial support towards the cost of installing a microgeneration renewable energy technology. The amount offered for each technology is outlined in figure one below.

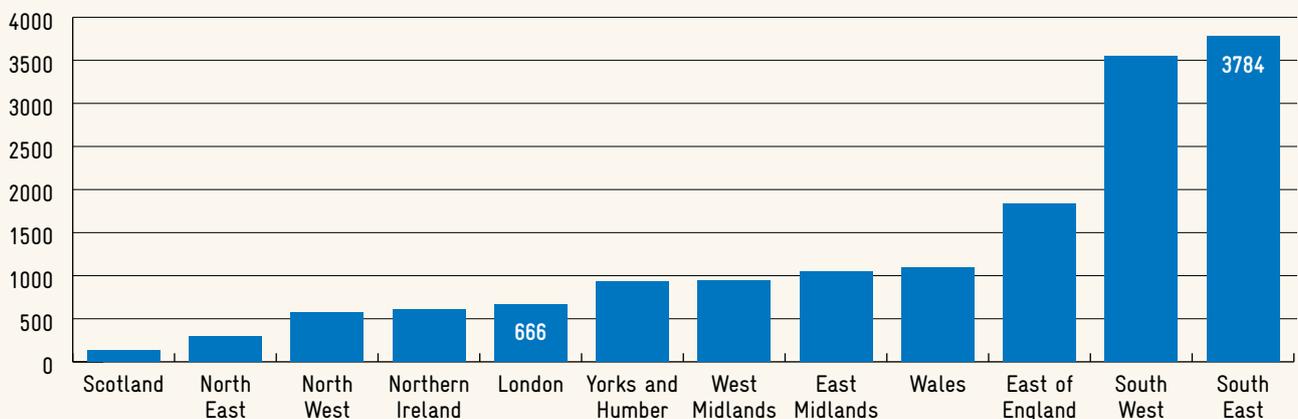
Figure two (below) helps to frame the impact of this scheme on a regional basis. Despite sharing a similar number of properties, the figures for London compare poorly with the South-East, reflecting installers’ historical preference to focus activities within the south-east rather than tackle the capital. The actual percentage of grants per household in London is approximately 0.02% highlighting the overall minimal impact of the programme.

Figure 1: LCBP grants for domestic microgeneration installations during the first two years of the programme<sup>3</sup>

Technology	Grants – first year	Grants – second year
Solar photovoltaics (PV)	Maximum of £3,000 per kW. Overall maximum of £15,000 or 50% (lower of the two)	Maximum of £2,000 per kW. Overall maximum of £2,500 or 50% (lower of the two)
Micro-wind and small hydro	Maximum of £1,000 per kW. Overall maximum £5,000 or 30%	Maximum of £1,000 per kW. Overall maximum of £2,500 or 30%
Solar thermal	Maximum of £400 or 30%	Maximum or £400 or 30%
Ground source heat pumps	Maximum of £1,200 or 30%	Maximum of £1,200 or 30%
Wood pellet fed heaters/stoves	Maximum of £600 or 20%	Maximum or £600 or 20%
Wood-fuelled boiler systems	Maximum of £1,500 or 30%	Maximum or £1,500 or 30%

Source: BERR, 2008

Figure 2: All committed Low Carbon Buildings Programme grants April 2006-August 2010<sup>4</sup>



Source: DECC, Low Carbon Buildings Programme; Phase 1, Stream 1 – Householder data (taken as of 10.08.2010)

3 The grants remained at the same level from the second year (2007) until its closure in 2010

4 Committed grants can be defined as those that have either already or are yet to be paid

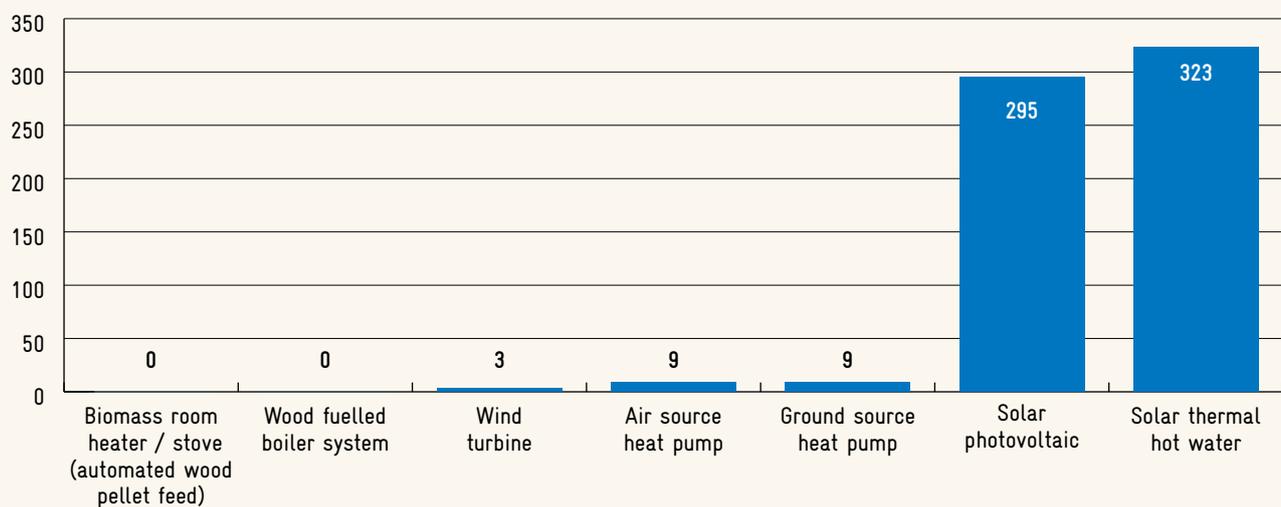
Whilst the LCBP figures will not account for every domestic installation commissioned within the capital, they do provide an indicative guide as to how the sector has developed to date. Figure three below indicates a strong focus towards the solar water heating (SWH) and photovoltaic (PV) market, highlighting two technologies which are well suited to London's compact built environment.

In addition to the LCBP programme, London has relied on a number of ad hoc grant schemes to further incentivise the domestic market. Local authority offers such as the "Camden Eco Grant" and the "Islington Climate Change Fund", are two high profile schemes that have proven to be effective support mechanisms behind the uptake of microgeneration technologies.

Historically, installers operating in London have tended to focus their activities on the more peripheral and affluent boroughs. These areas are generally considered to be less problematic for installers in terms of traffic, parking, shading and access to properties, both internal and external.

The overall trend in figure four (overleaf) points towards London's proven ability to react to progressive planning and fiscal policies. However, the volatile nature of ad hoc grant schemes has prevented any long term consumer awareness, an issue frequently fed back to the Energy Saving Trust during the interview process. In contrast the FITs and proposed RHI signal long term support to the market, and therefore an opportunity to become embedded as a recognised scheme within the domestic sector.

Figure 3: Breakdown of London's LCBP paid grants per technology, April 2006-August 2010



Source: DECC, Low Carbon Buildings Programme; Phase 1, Stream 1 – Householder data (taken as of 10.08.2010)

Figure 4: All paid grants per London borough: April 2006–August 2010



Source: DECC, Low Carbon Buildings Programme; Phase 1, Stream 1 – Householder data (taken as of 10.08.2010)

## Chapter 2

# Interview analysis

### Methodology

To help build up a complete picture of the issues that currently face the London sector, the Energy Saving Trust conducted interviews with the following industry representatives who were considered to have an active role in the sector:

- Planning and building control officers
- Trade representatives
- Sector skills councils
- Microgeneration installers (MCS and non MCS).

From current market knowledge on the nation-wide barriers, interviews followed a semi-structured format, and were designed to explore the following issues:

- Planning
- Building control
- Conditions for sector growth
- Marketing and communication
- Microgeneration Certification Scheme
- Skills.

A total of 25 interviews were conducted and in order to ensure that participants were free to express their own opinion responses have been kept anonymous.

### Planning

Planning has been raised as a key issue affecting the widespread uptake of microgeneration technologies and other intensive domestic retrofit measures, such as solid wall insulation. To identify the key issues, the Energy Saving Trust sought to interview a number of microgeneration installers.

#### Key planning issues

- Installer uncertainty surrounding permitted development
- Misconceptions surrounding the planning process
- Planning application costs for installers
- High drop off rate from homeowners who require planning permission

On the 6th April 2008 changes to Permitted Development laws have now made installing certain renewable energy technologies, such as solar panels, a lot simpler. The revised laws now grant the rights to carry out certain limited forms of development on the home without the need to apply for planning permission. For solar hot water and photovoltaics, the following installations now fall under “Permitted Development” unless:<sup>5</sup>

#### Roof mounted

- Panels protrude more than 200mm when installed.

#### Stand alone

- More than 4 metres in height
- Installed less than 5 metres away from any boundary
- Above a maximum area of array of 9m<sup>2</sup>
- Situated on a wall within any part of the curtilage of the house and would be visible from a highway in conservation areas and World Heritage Sites.

Yet despite these (Government) efforts to streamline the planning application process, there are a number of issues still affecting installers’ ability to penetrate the London market.

For fear of becoming embroiled in costly and protracted planning applications, both installers and consumers have reported a pronounced feeling of scepticism and reluctance to complete the necessary paperwork required by local planning authorities. However, interview evidence has indicated that much of this reticence can be unfounded or misguided. For example, installers that had been operating in the market for a number of years reported that planning permission was often a straightforward process.

Yet, Government guidance on renewable energy technologies does grant the right for local authorities to develop their own Local Development Framework (LDF) on how planning will be managed within each borough. For microgeneration technologies this has manifested in a degree of confusion amongst installers for proposed projects that fall within listed buildings or in conservation areas. Under this scenario, applications are often dealt with on a case by case basis, leading to installer frustration surrounding what they feel as inconsistent interpretation of local planning laws.

<sup>5</sup> Permitted Development does not apply to flats and maisonettes

As one installer explained:

*“If the building is listed, some local authorities do not allow microgeneration technologies whilst others do. Also, sometimes you don’t need planning permission but you still need listed building consent. Yet other councils require both?”*

The issue tends to be exacerbated for smaller and more recently MCS certificated companies, who are yet to build up an understanding of how the interpretation of these laws can vary between each borough. Installers have therefore called for clearer guidance on what is permitted for each microgeneration technology. When any form of additional planning consent was required, installers consistently reported that homeowners became discouraged from following through with an installation. The perceived time and costs associated with planning applications often led to a high drop off rate from applicants. In some cases this was reported to be as high as 50%.

Whilst some of the larger more established installation companies are able to allocate staff who deal specifically with more complicated planning applications, other less experienced businesses were sometimes reluctant to pursue leads that might involve planning applications with no guarantee for a successful outcome. Whilst the majority of London based installers reported that approximately 85–90 per cent of applications now fall within permitted development, for projects proposed for London’s inner city boroughs, this figure was reported to fall as low as 25%. For example, in Camden there are 39 conservation areas covering nearly 75% of the borough. Given these figures, there is a need to develop a more attractive framework for businesses of all scales to engage homeowners who require planning permission.

## Planning officers at local authorities

In order to examine the issues faced by local authorities, the Energy Saving Trust interviewed a number of local authority planning officers and renewable energy installers.

### Key points

- Inconsistency in the level of information required by planning control officers
- Lack of skills, understanding and awareness amongst front line local authority planning staff on the application of laws for domestic properties
- Planning officers tend to be more experienced with commercial and large scale residential new build rather than domestic retrofit
- Installers focusing business opportunities in boroughs, which are considered to have “pro renewable” planning staff.

Installers currently engaged in the London market revealed a tendency by some local authorities to look more favourably upon planning applications for microgeneration technologies. Merton, Islington, Camden and Croydon were frequently cited as local authorities that installers considered as “pro renewables”. These boroughs were generally acknowledged to have a more detailed understanding of the local planning laws, which ensured that applications were dealt with in a more co-ordinated and timely manner.

However, as the Feed-in Tariffs open the London microgeneration industry up to a much broader market, there is a long term concern that installers will remain operating in the more familiar boroughs, where experience has taught them what is and is not likely to be permitted by planning officers.

Installers and local authorities had both raised the issue of high staff turnover within planning departments. This will inevitably prevent local authorities from building up the necessary skills and understanding of how microgeneration technologies are affected by local planning laws. This has in cases, led to installers becoming frustrated with inconsistent and conflicting information being fed from within the same planning department.

A number of local authorities were reported to have developed a “customer services team” dedicated to answering frequently asked questions on planning and microgeneration technologies. However, these front line staff were regularly criticised by installers for lacking the necessary skills and understanding of local planning laws, which often led to planning applications being delayed.

Furthermore, for more complex queries front line staff were reported to lack the necessary knowledge for whom the case should be passed onto, resulting in further delays.

From a local authority perspective, resource constraints were a frequently cited as preventing planning staff from building up the necessary knowledge of local and national planning laws. Interviewed planning officers acknowledged that their experience to date has focused more towards large scale commercial projects rather than domestic retrofit measures at the microgeneration scale. Furthermore, due to the differing local authority staff structures, installers were frequently unsure as to who they should contact when seeking clarification on local planning laws.

From a planning perspective, the high number of local authorities found within a relatively compact geographic area has created confusion for many installers. A recurrent theme reported by one training provider highlighted that many installers simply assume that microgeneration technologies are not permitted within London. Consequently, installers located on the peripheries of the M25 will tend to focus their activities within the South-East and East Anglia rather than face what is considered an overly bureaucratic London planning system.

## Building control

To help understand the issues that relate to Building Control, the Energy Saving Trust has interviewed a number of local authority Building Control officers, installers and trade representatives.

### Key points

- Lack of guidance for microgeneration installers surrounding what type(s) of work are deemed “notifiable” under current Building Regulations
- Installer malpractice – businesses cutting costs and undercutting competitors by not notifying Building Control officers
- Inconsistencies between local authority building control staff on what works are considered notifiable for each of the microgeneration technologies.

Most microgeneration systems involve work that are defined within Building Regulations and are therefore required to be shown as compliant. In particular Part G – sanitation, hot water safety and water efficiency, and Part P – electrical safety. Other areas include resistance to moisture, structural and fire safety, as well as conservation of fuel and power.

Interviewed installers frequently cited uncertainty surrounding what works (or part of) relate to which sections of the Building Regulations, as outlined from Part A to Part P. Consequently installers that are registered under the Competent Persons Scheme (CPS) are unsure as to whether they need to notify building control.

Costs for Building Regulations compliance are always to a sliding scale, dependent upon factors such as the scale and costs of works, type of technology and current building structure. Research has shown that on a domestic scale for solar technologies (PV and SHW), prices tend to start at around £150 but can rise to around £500. In an attempt to cut costs and undercut competitors, there were a number of complaints that installers were not notifying Building Control when commissioning systems.

A recurrent theme for many installers was the inconsistent information fed from local authority building control teams on what types of work require notification. For example, installing an un-vented cylinder as part of a SHW system is always notifiable under Part G<sup>6</sup> however; there is a current lack of Government guidance on what other types of conversion work require building notice. Until clearer guidance is issued by Communities and Local Government (CLG)<sup>7</sup> it would appear that inconsistent information fed from local authorities and alleged installer malpractice will continue.

It is important to note that being an MCS certificated installer does not qualify the installer to self certify work. The MCS scheme is a certification process and not a Competent Persons Scheme. However, some certification bodies will offer both MCS and CPS as a combined package. To help resolve this issue, discussions are currently under place between CLG and the MCS steering group on how the two can be harmonised.

6 Building Regulations for sanitation, hot water and water efficiency

7 Communities and Local Government are the Government body responsible for Building regulations

## Sector growth

The following section investigates the issues that have affected the growth of the London market to date.

### Key points

- Low number of MCS certificated installers based in London versus the South-East
- Limited impact of the Low Carbon Buildings Programme in London
- Difficulties for recent market entrants to gain a foothold within the industry
- Installer concern regarding manufacture led training for microgeneration technologies
- Installer inability to remain independent within the sector, and free to install across a range of system and product types.

The London microgeneration sector is currently characterised by a relatively low number of installers compared with the surrounding counties. Key at this stage is to ensure parity within the market, providing an industry platform that allows a range of companies (both in size and technology type) to effectively compete. Laying the

foundations for an attractive, healthy and competitive market will help to drive down installation costs to the point whereby they become financially competitive with conventional fuel types.

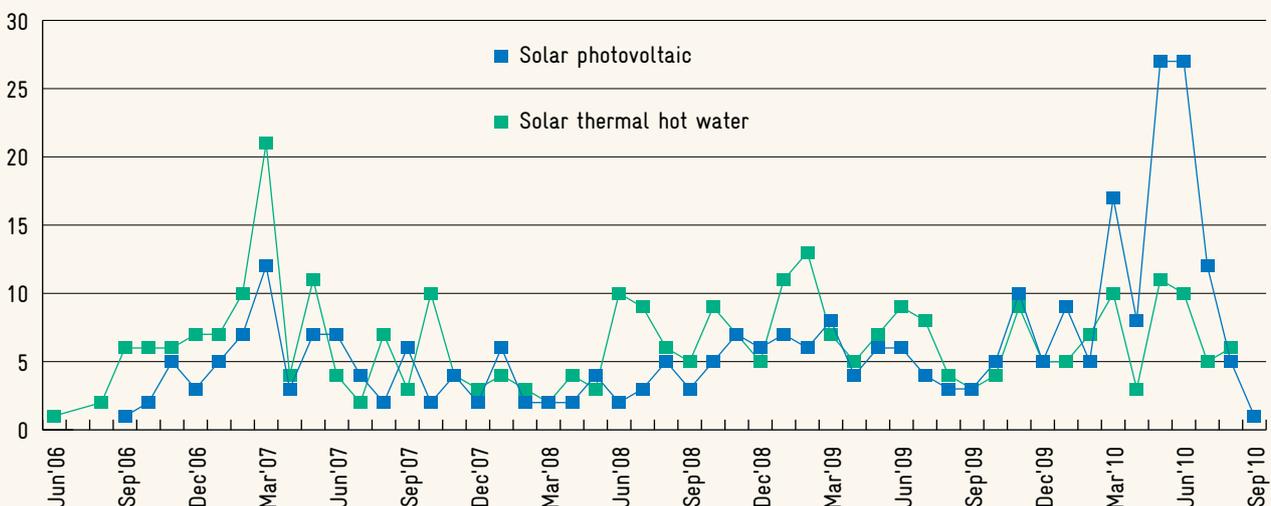
Historically, the UK microgeneration market has relied upon ad hoc grant schemes that have provided sporadic and limited industry growth. Figure five (below) outlines how the Government backed Low Carbon Buildings Programme grant scheme for domestic installations, whilst successful in initiating consumer demand, has not managed to stimulate long term industry growth.

What could now be considered as more of a historical concern is the number of respondents that had raised the issue of exclusive installer networks, which were affiliated with local authority grant or managing agent schemes. Recent market entrants found that some schemes were being ring fenced through a pre-approved list of installers, creating what many considered an unfair market environment.

The lack of external competition was considered to have a number of negative consequences for the London market:

- 1 Installers reported that consumers often ended up paying more for a technology.

Figure 5: LCBP data: installations per technology – London



Source: DECC, Low Carbon Buildings Programme; Phase 1, Stream 1 – Householder data (taken as of 10.08.2010)

- 2 A lack of external competition would limit the variety of system options available to the consumer and provide little in the way of incentivising installer standards.
- 3 Local authority schemes often meant that homeowners were dependent on the employees of local authorities commissioning such schemes, and having the skill and the will to police them. For this reason interviews revealed a number of cases whereby homeowners had actively mistrusted local authority supported schemes.

Despite this, the recent introduction of the FITs programme has reduced the need to rely on grant schemes to stimulate market demand. As uniform support is provided across all London boroughs, the incentive to establish a pre-approved installer network affiliated with local promotional schemes should, over time, diminish.

A potentially significant concern raised at this stage, was the ability to remain independent within the sector and free to install across a range of system and product types. Larger installation companies, or product manufacturers, have begun to offer installers a route to market by providing training to individuals on renewable energy technologies and the opportunity to gain MCS certification.

Given this scenario, parent companies will tend to retain control over what products a subcontractor will install. Furthermore, there is a concern that the current range of training courses are not providing installers with sufficient exposure to a range of system types within each technology set. Companies that have sought to upskill their current workforce were reported to be concerned that training programmes had become “manufacture led” enticing installers with the opportunity to buy their own products at a discounted rate.

There is a risk that installers become accustomed to fitting a specific product, rather than looking to commission “an entire system” that is best suited to meeting the occupants’ energy demand. Given London’s unique housing stock and heterogeneous heating systems, it is important that the consumer has the option of installing the most appropriate system for their property.

The ability for new market entrants to gain a foothold within London has been a recurring theme for many installers. This is a disappointing discovery and a shame to report as forecast levels of demand versus capacity mean that there should be enough work to go around all market players.

## Marketing and communication

Investigations by the Energy Saving Trust revealed a number of marketing and communication barriers that were impacting upon the growth of the London market. The following section highlights the issues raised by installers.

### Key points

- Poor communication of previous Government grant schemes
- Difficulties for London based installers to effectively market their name
- High level of consumer misconception still surrounding the feasibility and application of microgeneration technologies
- Low level of consumer awareness surrounding the Feed-in Tariffs.

A number of installers had complained of how poorly many of the previous local and national government grant schemes were communicated to the domestic market. “Solar for London”, a grant scheme aimed at providing financial support towards installing a solar water heating system, was regularly criticised by installers for its low public profile, leading to what many felt as a missed business opportunity. A theme that has continued to this day, as one installer stated:

*“Feed-in Tariffs are probably the biggest thing to happen within this industry, and yet there has been next to no publicity surrounding the scheme”.*

Whilst London has a significant able to pay market, installers reported how the city’s competitive market environment was proving difficult for businesses to raise their company profile, even within their local community. Interviewees consistently reported a concern for the degree to which they relied upon “word of mouth” to generate consumer demand. The inability for installers to effectively market their name was pushing business activities more towards the South-East, where advertising was reported to be cheaper.

A number of installers had reported a high level of consumer misconception that surrounded many of the microgeneration technologies. As a corollary to this, many interviewees reported the burdensome time spent explaining the feasibility and application of a technology.

The amount of time that installers spent filtering potential leads has inevitably had a higher impact upon the smaller sized companies, who are less able to devote the necessary time to deal with customer queries. This contrasts with more medium sized businesses that, in cases, were able to employ front line staff dedicated to qualifying whether a potential lead is “hot” or “cold”.

In an attempt to try save on time and money, there have been a number of reported cases whereby consumers had “pre-qualified” themselves and bought pre-engineered online solar PV kits. In many cases this has led to hazardous installations, which were not only poorly equipped to meet the energy demands of the occupant but also failed to qualify the homeowner for the Feed-in Tariffs. Poorly installed systems and exaggerated performance claims were two recurring themes that installers felt were damaging the reputation of the industry.

## Issues surrounding MCS scheme

The Microgeneration Certification Scheme (MCS) is the Government backed quality assurance scheme for microgeneration technologies. It is aimed at demonstrating to customers that renewable energy technologies and installers are reliable and competent, ensuring quality within the market place. In order for customers to qualify for the FITs, they must use MCS certified installers and products. The Energy Saving Trust fully endorses the MCS programme and recognises its importance as a means to protect consumers, installers and wider stakeholder organisations within the industry.

### Key findings

- Lack of awareness surrounding the MCS scheme, what it is and where to go for the relevant training
- Smaller sized companies have tended to struggle with the necessary quality management procedures exacted by the MCS process
- Confusion surrounding training requirements to pass MCS inspection.

Interviewed tradesmen who were considering MCS certification had revealed a number of misconceptions surrounding the scheme. Whilst there are a number of recurring themes that are genuinely proving unattractive for installers who are considering the MCS process, the Energy

Saving Trust has sought to dispel some of the regular misconceptions that surround the scheme.

- **Q: Why are the certification requirements for matters such as quality management procedures, and health and safety, the same for self employed one man companies as for larger organisations?**

A: Although the heading for the procedures are the same a Certification Body would expect to see different content in the procedures for a large company compared to a small company.

- **Q: Why are the fees for certification the same regardless of the company size?**

A: The fees structure will vary between each of the certification bodies.

- **Q: Why does the certification process take so long, I heard the process can take between 12 and 24 months to complete before a company is ready to be assessed?**

A: The length of the process depends on a number of factors. You should contact a Certification Body for more information. However, the time taken for a well structured company takes approximately 4-6 months.

- **Q: Why is the cost of becoming accredited (not including time spent on preparing documentation and implementing company procedures) so high?**

- A: To fund the scheme the MCS charge a £100 annual fee. Installers are also charged £5 per installation. This £5 per installation charge ensures that the scheme charges are not onerous for smaller installer companies. The Certification Bodies fees are different for each company. As of March 2010 the prices started from around £650 for one technology which included the first year's MCS annual fee. There are now 13 Installer Certification Bodies that are all competitively priced.

- **Q: It is extremely difficult for anyone new to become accredited due to the requirement to provide a number of installations for inspection by MCS. With the FIT in place – nobody wants to have an installation carried out by a company who does not have MCS certification.**

- A: It is between 1 and 2 installations for assessment depending on the Certification Body. The installation used for the assessment will be eligible for the Feed-in tariffs.

- **Q: Why can I not self certify work if I have MCS certification?**

A: The Competent Persons Scheme (CPS) enables you to sign-off installations compliant with building regulation only, which reduces the costs and risk to your clients. CPS at present are not certificated to the EN45011

standard, which is the international standard, however, this may happen after the consultation on CPS is complete. MCS is certificated to the EN45011 standard, which demonstrates that all your practices and skills meet the MCS standards and requirements. This includes correctly specifying the performance of the system offered against the user requirements. Yours CPS is not duplicated as the competences you have demonstrated through the CPS are taken by the Certification Bodies as part of your compliance evidence.

- **Q: What happens if I fail the inspection and what are the recurring costs?**
- A: Many installers are concerned about the uncertainty of whether they would pass inspection and the recurring costs if re-assessed. Research conducted by the Energy Saving Trust, indicate that costs can range from £200-£750 depending on the certification body.<sup>9</sup> However, you should always check this with the assessment body beforehand.

For further information regarding the MCS process and wider FAQs please visit <http://www.microgenerationcertification.org/>

## Skills gaps

In order for London to successfully capitalise on consumer demand expected from the FITs and proposed RHI, it is imperative that there are the current skills sets available within the capital. The following section outlines the available skills base and assesses the current level of training provision in London.

### Key issues

- Difficulties faced by installation companies to recruit the necessary skills and experience required to expand their business
- Concerns over the quality of installed work for commissioned systems that had been subcontracted out by an MCS certificated company
- A lack of renewable energy training courses available in London

- Installer uncertainty surrounding the identification of training courses that have been industry approved, and where to access training.
- Little support from public bodies to support the capital costs to initiate new courses in microgeneration technologies.

Figure six reveals the current number of MCS certificated installers split into technology type. Please note that there will be an overlap between each of the technologies, as some of the registered PV installers also cover solar hot water (SHW) and vice versa.

There are currently 42 MCS certificated installers registered within the M25. This is out of a UK total of 1004 (including London).<sup>10</sup>

**Figure 6: Number of installers based within the M25**

SHW	17
PV	30
GSHP	3
ASHP	3

Given London's 3.2 million properties and considerable "able to pay market", evidence points towards a shortage of installers to deliver on expected demand. The Government's recent consultation reports on the Feed-in Tariffs and proposed Renewable Heat Incentive estimate 800,000 and 1.9 million UK installations respectively by the year 2020.<sup>11</sup>

From a skills perspective, London based installers frequently reported the need for more qualified roofers to ensure that solar panels are securely fitted. A shortage of labour in this field has forced a number of businesses to look abroad in order to recruit those with the necessary skills, a process that will often penalise businesses both in time and money.

<sup>9</sup> Figures were taken from investigations conducted in March 2010

<sup>10</sup> Taken as of 16/8/2010

<sup>11</sup> [http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20mix/renewable%20energy/renewable%20energy%20strategy/1\\_20090715120436\\_e\\_@@\\_ukrenewableenergystrategy2009iaforsmallscalerenewableelectricityurn09d687.pdf](http://www.decc.gov.uk/assets/decc/what%20we%20do/uk%20energy%20supply/energy%20mix/renewable%20energy/renewable%20energy%20strategy/1_20090715120436_e_@@_ukrenewableenergystrategy2009iaforsmallscalerenewableelectricityurn09d687.pdf)  
[http://www.rhincentive.co.uk/library/regulation/100201RHI\\_design.pdf](http://www.rhincentive.co.uk/library/regulation/100201RHI_design.pdf)

Furthermore, as the FITs have begun to stimulate consumer demand, businesses were concerned by the lack of skilled operatives capable of meeting the standards outlined in the MCS scheme. Investigations by the Energy Saving Trust revealed a number of cases whereby installers had been called out to repair works originally completed by an MCS certificated company who had subcontracted the original works out. The issue tended to be particularly acute for solar water heating systems, which due to their inherent number of internal components, will often require careful design and commissioning given the occupant heating demand, internal space restrictions and the incumbent technology.

Under the current scheme a MCS accredited organisation is responsible for “the supply, design, installation, set to work, commissioning and handover of the microgeneration technologies”.<sup>12</sup> Therefore it is the responsibility of the company and not the installer to ensure works meet the MCS standard. As this sector is expected to grow, it is essential that installers, whether subcontracted or employed directly through an MCS company, are able to install to the required standards, ensuring long term consumer confidence in the market.

## Skills for Climate Change project

Skills for Climate Change is a London Capital Colleges project that aims to develop and test a skills framework that will support the transition of the Building and Construction Services industry to a low carbon workforce. As part of this project, London Capital Colleges commissioned Ecotec Research Consulting Ltd to map the available training, course provision and skills shortages for each renewable energy technology in London.

The report identified the following:

- Solar hot water – 4 relevant courses and 4 providers but with capacity issues
- Solar PV – 4 relevant courses and 4 providers but capacity issues
- Domestic wind energy – 2 relevant courses and 0 providers

- Heat pumps – 4 relevant courses and 3 providers but capacity issues
- Biomass and domestic biofuels – 2 relevant courses and 0 providers.

Given the current training provision in London, the report highlights a significant potential skills gap over the next five years, revealing an annual shortfall of between 1000-3000 available places for courses on solar hot water, PV and heat pump technologies.

To understand the current issues surrounding course provision in London, Ecotec<sup>13</sup> interviewed three MCS certification bodies (BPEC, LOGIC and NICEIC) who highlighted the following issues:

- A degree of confusion among people regarding pre-requisites for courses, i.e. that anyone could do a course, when participants actually needed electrical or plumbing qualifications etc.
- Little support from public bodies to support the capital costs to initiate new courses, for example to buy the solar panels and systems needed for practical training
- The courses they offer have usually been active for 1 year or less and have required significant investment by the firm in both equipment and training staff
- Lack of consumer demand for training that has prevented course providers setting up programmes.

London's core inability to provide the necessary training skills recognised under MCS programme is likely to impact upon the effectiveness of both the FITs and proposed RHI programme. As the sector grows there will be a requirement for higher numbers of skilled technicians to install and maintain microgeneration systems. In order for current installation rates to be accelerated, it is necessary to ensure that the skills and training are in place to realise London's potential demand and wider Government renewable energy targets. The Government is working with SummitSkills, one of the Sector Skills Councils, to develop National Occupational Standards (NOS) for environmental technologies, helping to ensure consistent installer competence standards.

<sup>12</sup> Source: <http://www.microgenerationcertification.org/Benefits+and+MCS+Certification+Process/Installer+Certification/Installer+Standards>

<sup>13</sup> Ecotec Research and Consulting Ltd is an international provider of research, consulting and management services focused on the development, delivery and evaluation of public policy

## Chapter 3

# Energy Saving Trust recommendations

In light of the issues raised, the following section lists a number of industry recommendations that the Energy Saving Trust is looking to develop through its proposed installer partnership forum. The purpose of this forum is to address the London specific issues that are affecting installers. The current outline of the forum and its intended activities are listed in Chapter four.

The Energy Saving Trust recommendations that ensue have been broken down into the following sections:

- 1 Planning guidance
- 2 Skills
- 3 Marketing and communication
- 4 Microgeneration Certification Scheme
- 5 Building control

Please note that the recommendations are intended to give an overview of the types of activities that we are looking to develop through the installer partnership forum.

### Planning guidance

- The Energy Saving Trust recommends training for installers on local planning laws, which could be facilitated through the proposed installer partnership forum. The training would look at Government guidance outlined in Planning Policy Statement 22 (planning for renewable energy), and Planning Policy Statement 5 – planning for the historic environment. The forum would allow installers the opportunity to invite in local planning officers to address borough specific issues.
- Drawing upon a compiled list of real life case study examples, the Energy Saving Trust recommends developing guidance material for both local authority planning staff and microgeneration installers. This would include drawing up a check list guide for installers and consumers of the likely requirements when applying for listed building consent or for properties situated within conservation areas.
- The Energy Saving Trust recognises that builders and industry related tradesman will often advise homeowners on microgeneration technologies when carrying out work on a property. Through our Low Carbon Homes team, the Energy Saving Trust is currently developing guidance material on planning legislation for the housing trade and industry, which is likely to encompass microgeneration technologies.

- In order to de-mystify what is permitted in a conservation area, the Energy Saving Trust recommends developing top tier guidance material for installers but referring to individual Local Authorities for in depth assistance. This would include information on listed buildings, article 4 areas and building control. Guidance would be produced in a “London Template” format that could be edited by local authority Planning and Building Control staff to reflect in house policies. The Energy Saving Trust is currently working up a draft version of what this template would look like. An example of this can be found in appendix A.
- To help streamline planning applications for domestic microgeneration systems, the Energy Saving Trust recommends bringing local authority planning departments together to share best practice. This could be facilitated through existing steering groups such as the Association of London Borough Planning Officers (ALBPO) and would provide an opportunity to tackle concomitant planning concerns for energy efficiency measures.

### Skills

- In order to maximise value for money, avoid duplication of skills and ensure independence within the market, the Energy Saving Trust recommends drafting guidance for Installers on what current training programmes are available in the South-East and London regions, helping to ensure a direct route to MCS certification. The proposed partnership forum could act as a central repository for feedback on the usefulness of available courses.
- Through the partnership forum, the Energy Saving Trust proposes developing workshops for installers to identify which areas of support are required to help develop their business. The Energy Saving Trust works closely with organisations such as Business Link London and Summit Skills, who could be brought on hand to provide advice and support to companies looking to expand their business.

### Marketing and communication:

- In order to protect consumers against exaggerated performance claims and misconceptions about renewable energy technologies, the Energy Saving Trust has developed a number of online tools. By clicking on the “Generate your own energy” section of the Energy Saving Trust website, consumers will be able to find information on average performance figures, work out payback periods with our “cash back calculator”, as well as look at real life video case study examples of installed technologies on peoples’ homes. For further information please visit: <http://www.energysavingtrust.org.uk/Generate-your-own-energy>
- To help installers’ resolve the issue of marketing their business in London, the Energy Saving Trust is currently developing an installer search facility for homeowners who want to locate their nearest MCS certificated installer. The tool will initially be made available via the Energy Saving Trust advice centres, with a view to making it publicly available online.

### Microgeneration Certification Scheme

- The Energy Saving Trust has a number of microgeneration co-ordinators who are responsible for developing industry insight into the issues that affect installers throughout the UK. The Energy Saving Trust has continually looked to feed these issues raised by installers back to the MCS steering group, a body that is responsible for refining the certification process and ensuring that installation standards are upheld. The proposed partnership forum provides an opportunity to establish a recognised communication channel for accredited installers to feed back on their experiences of the MCS process.

### Building regulations

- To help overcome current confusion surrounding how Building Regulations are being interpreted, the Energy Saving Trust recommends drawing up workshops between installers and building control officers to help resolve the areas of uncertainty and current conflicting information. The installer partnership forum could be used to help develop a guiding document for both installers and local authority staff to prevent further confusion.



## Chapter 4

# The case for a local partnership forum

A number of the above recommendations have pointed towards the Energy Saving Trust setting up a forum for installers of microgeneration technologies.

The main purpose of the forum would be to act as a driver for the economic and commercial growth of the London microgeneration sector.<sup>14</sup>

The objectives of the partnership are:

- 1 Create a business network that will provide collective leadership and offer a single point of contact for microgeneration products and services to:
  - **Provide accelerated access to commercial opportunities across London**  
The Energy Saving Trust will maximise the effectiveness of its close links with the regional Government agencies, local authorities, community groups and other Energy Saving Trust industry contacts, by providing up to date information about business opportunities and developments to the partnership
  - **Provide smaller sized companies with the opportunity to collaborate and competitively tender for large scale projects**
  - **Provide accelerated access to information on industry innovations and technological developments**  
Via existing and new links with centres of excellence; Universities; Energy Saving Trust research and development; The dissemination of latest market intelligence received by the Energy Saving Trust
  - **Provide access to funding information**  
Information about government initiatives and regional project bids will be made available
  - **Provide access to public sector policy information**  
Through the provision of timely communications regarding national, regional and local strategy developments in the renewable energy sector
  - **Provide opportunities for peer-group networking and cross-fertilisation of views**
  - By bringing people together to discuss common issues and concerns at regular meetings, events and informal contacts. The Energy Saving Trust would be on hand to invite individuals with the relevant expertise and knowledge to help resolve the issues raised by installers
- **Stimulate business development in emerging markets**  
By setting up an informal partnership and encouraging collaborative marketing and profile raising activities to ensure the sector has higher visibility, and is more accessible to purchasers of products and services
- **Improve productivity, customer service and quality as a result of increased competition**  
Feedback from client and customer referrals will be used to monitor satisfaction
- **Provide enhanced opportunities for company self-promotion and marketing**  
Via a partnership web-site, events, press releases and case studies
- **Provide enhanced opportunities for installers to negotiate discounted training – through bulk purchase arrangements.**
- 2 To create a collaborative partnership that is capable of providing strategic advice to assist and influence public sector decision-making by:
  - **Becoming the ‘voice of the microgeneration sector in London**
  - **Becoming a single point of contact for public sector enquiries**
  - **Being an accurate source of sectoral statistics and business information.**
- 3 To ensure the sufficient supply of trained and competent personnel for the sector as a result of:
  - **Developing close working links with colleges, training providers and sector skills councils**
  - **Actively supporting apprenticeship schemes**
  - **Working collaboratively to review the quality of training schemes/courses**
  - **Being better informed about skills based funding**
  - **Creating demand for the formulation of new renewable energy courses in London**
  - **Initiating schools projects.**
- 4 To raise the profile and develop the reputation of microgeneration products and services through:
  - **Collective PR (success stories, regional awards)**
  - **Collective marketing**
  - **Regional exhibitions**
  - **Demonstration projects.**

<sup>14</sup> The partnership forum would be split between MCS and non MCS installers. The non MCS forum would be aimed at supporting installers with necessary training and qualifications that would contribute towards MCS certification

## Chapter 5

# Consumer demand: advice centre and online metrics

The Energy Saving Trust runs nineteen advice centres across the UK. The centres are intended to offer free and impartial advice on energy efficiency, transport, renewable energy technologies, waste and water.

By monitoring the incoming calls to the London advice centre, the Energy Saving Trust is well placed to gauge the strength of consumer demand and areas of interest for each microgeneration technology.

Furthermore, by monitoring activity on the Energy Saving Trust’s website, we are able to track not only where consumer interest lies but evaluate the usefulness of our online tools.

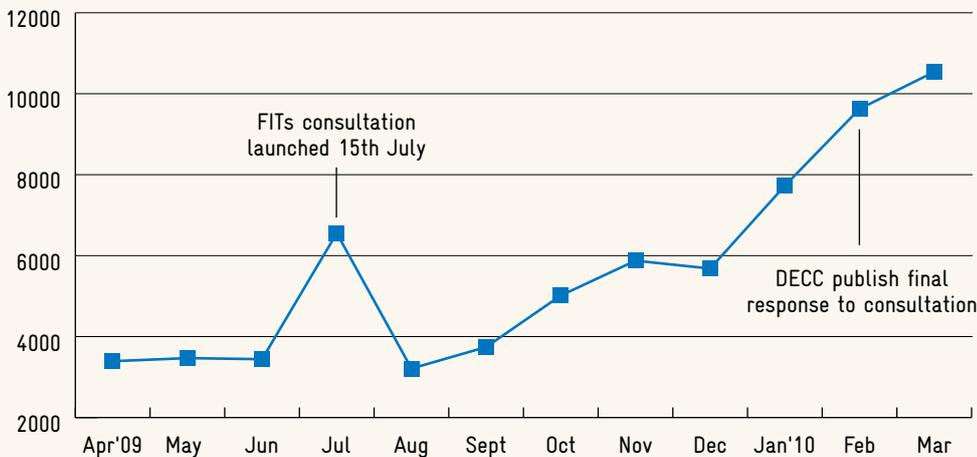
### Online metrics

The following graphs relating to London online activity are an approximation only. Whilst the Energy Saving Trust is able to accurately monitor UK activity, we have relied upon a series of calculations to estimate what percentage of traffic is likely to be attributed from London based web users.<sup>15</sup>

Energy Saving Trust advice centres



Figure 7: London visits to Generate Your Own Energy April 2009–March 2010



Source: Energy Saving Trust data

15 In order to estimate the volume of web based activity attributable to London, the Energy Savings Trust used the following percentage deletions from the total UK online traffic: Cookie deletions (takes off 20%) – 80%; UK traffic – 86.06%; England – 91.26%; London – 21.92%

### Generate Your Own Energy

Found on the Energy Saving Trust's homepage, the "Generate Your Own Energy" link acts a portal to information relating to all of the domestic microgeneration renewable energy technologies. The two major spikes in figure 7 reflect the former Government consultation on Clean Energy Cashback, launched 15th July 2009, and the

final response, which was released February 2010. Over this period and particularly over the months from January to March as details of the scheme were communicated more widely, we saw a considerable increase in consumer interest in small-scale low carbon energy generation, and in particular solar PV.

Figure 8: London visits to Sell Your Own Energy



Source: Energy Saving Trust data

Figure 9: London visits to the Home Energy Generation Selector



Source: Energy Saving Trust data

### Sell Your Own Energy

This part of the website provides links to our online Cashback Calculator, further information on the Feed-in Tariff scheme and guidance relating to the proposed renewable heat incentive. In the lead up to the launch of the Feed-in Tariffs (April 1st 2010), there was a surge in online interest. Whilst figures have subsequently fallen after this period, online interest remains above pre FITs announcement.

### Home Energy Generation Selector

The Home Energy Generation Selector tool, launched on the website last June, helps householders to identify which small-scale low carbon technologies maybe most suitable for their home, and provides an estimate of the potential financial and carbon savings they might see from the various options available to them.

Once again the first major spike in July can be attributed to the launch of the former Government consultation on the Clean Energy Cashback scheme, and in the run up to the actual launch of the scheme there is an increase in consumer activity.

Figure 10: The online Cashback Calculator



Figure 11: London visits to the online Cashback Calculator



Source: Energy Saving Trust data

### Cashback Calculator tool

The Energy Saving Trust has recently developed an online web tool, allowing users to learn how much they could earn and save through investing in solar electricity or wind turbine systems and receiving Feed-in Tariff payments.

Users can enter details of their system to calculate the annual output that it is expected to generate. The web tool then provides an estimate of income earned from the generating tariff, and the export tariff. It also shows the potential saving on electricity bills which comes from using any generated electricity in the home, rather than exporting it.

In the investment section users can enter details of any loans that they might take out to pay for the system, including the interest rate of the loan. The tool will then calculate the payback time, based on current electricity prices.

For further information please visit: <http://www.energysavingtrust.org.uk/Generate-your-own-energy/Cashback-Calculator>

The Cashback tool has proved a success, helping consumers to grasp how beneficial the Feed-in Tariffs can be. Figure 11 charts a strong rise in consumer interest over a six month period.

### Advice Centre Metrics

Through monitoring the type of enquiry received by our London advice centre, the Energy Saving Trust is able to assess the level of consumer interest in renewable energy technologies. Figure 12 shows us that as we approach the autumn period, we are beginning to witness a gradual increase in the number of enquiries.

Figure 13 (overleaf) helps to frame where London's consumer interest lies for each technology type. From January to August 2010, there has been an overwhelming interest in solar PV technologies. Whilst this will in part be attributed to the recent launch of the Feed-in Tariffs, it also reflects the suitability of PV technologies within London's compact urban environment.

### The impact of the Feed-in Tariffs to date

From a national perspective figure 14 (overleaf) highlights the impact that the Feed-in Tariffs have had to date with the uptake of solar PV considerably outweighing other electricity producing technologies.

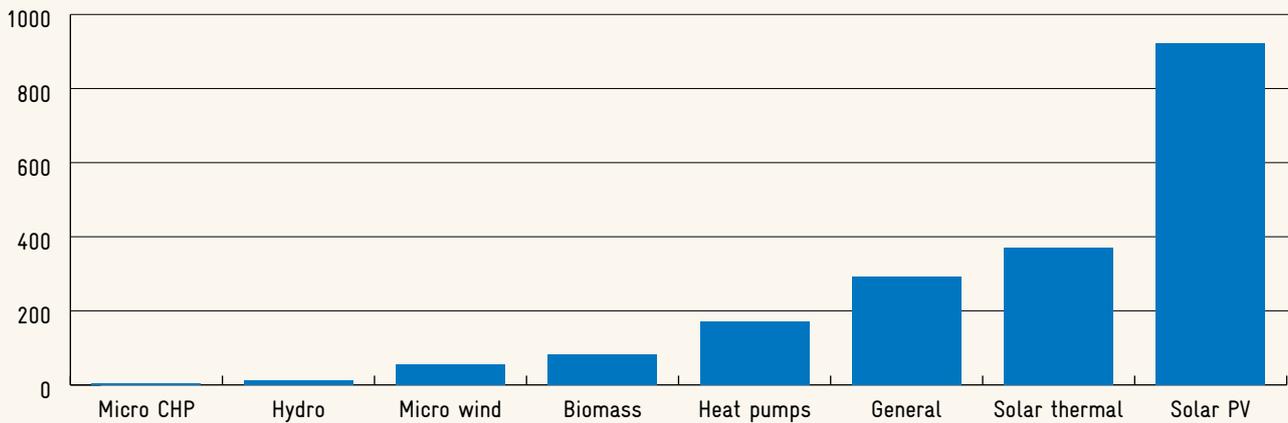
Whilst the LCBP grant scheme managed to stimulate 639 installs over a four year period, figure 15 shows that the FITs have already led to 455 domestic installations within an approximate five month time period, highlighting the initial success of the scheme.

Figure 12: London number renewable energy queries in London from Jan 2010–Sept 2010



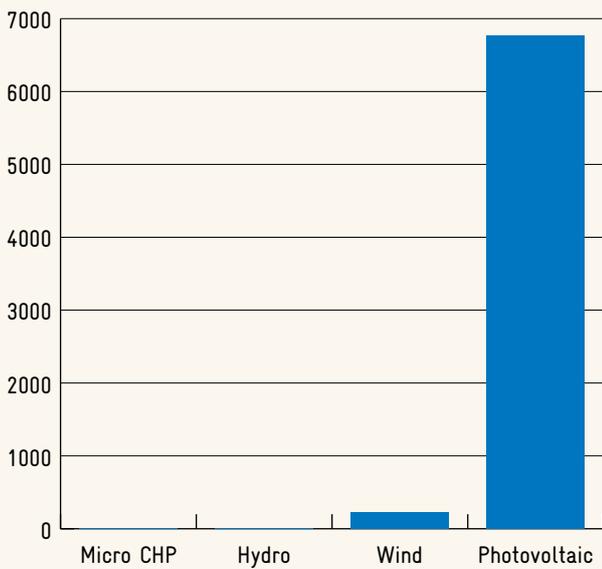
Source: Energy Saving Trust data

Figure 13: Renewable energy advice provided by the London Energy Saving Trust advice centre from Jan 2010–Aug 2010



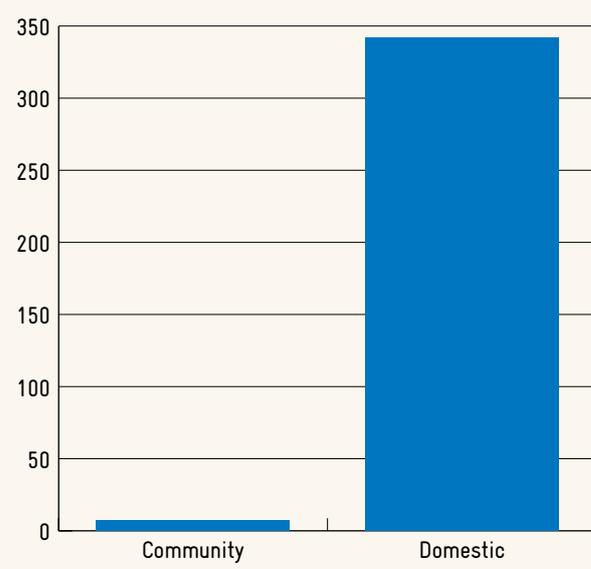
Source: Energy Saving Trust data

Figure 14: National outlook – all domestic installations from 1st Apr 2010–26th Aug 2010



Source: <https://www.renewablesandchp.ofgem.gov.uk/>

Figure 15: London domestic and community photovoltaic installations from 1st Apr 2010–13th Sep 2010



Source: <https://www.renewablesandchp.ofgem.gov.uk/>

## Chapter 6

### Conclusion

To date the London microgeneration market has been typified by sporadic and regionalised growth, with installer activities focusing on the more affluent and peripheral boroughs. These industry trends reflect the ad hoc and limited fiscal support mechanisms that have historically been made available to Londoners. Given this scenario, interviewed installers frequently complained of how low public awareness had impacted upon the effectiveness of local and national grant schemes, and how their associated exclusive installer networks were limiting business opportunities for recent market entrants. As outside competition was curtailed, consumers frequently ended up paying over inflated prices for a limited range of system types.

Prior to this report traffic, congestion charging, parking and access to properties were all well acknowledged factors that have stymied the London market. However, interview analysis had revealed a number of separate issues. Confusion surrounding planning permission and building control were frequently cited by installers as an impediment toward the progression of the London market. Whilst homeowners and installers were equally reluctant to engage local planning processes, identifying what works require building control notification remains an unresolved issue for the UK microgeneration industry.

With 42 London based MCS installers, the current market leans heavily towards SHW and PV, two technologies that have proven adaptable to London's compact urban environment. However, increasing the number of MCS accredited installers is clearly an issue for the capital. Existing tradesmen frequently complained about the current level of course provision and guidance on which courses were considered to be industry approved. Furthermore, interviews revealed a number of misconceptions surrounding the requirements for the MCS scheme, which were dissuading tradesmen away from the market. It is hoped that the current work by Summit Skills on mapping renewable energy courses to the National Occupational Standards will help reduce installer confusion on current training provision and where courses can be accessed.

Despite the short time period that the Feed-in Tariffs have been live, the demand generated is nearly on a par with registered uptake over a four year period through the LCBP grant programme. Key at this stage is to set the tone for a more attractive and equitable market environment for those who are considering MCS certification. The Energy Saving Trust is looking to resolve many of the issues raised by installers through the proposed installer partnership forum, helping those engaged in the industry to realise the full market potential that exists within London's 3.2 million homes.



## Appendix A

### Example of planning and building control matrix

Technology type	No designation (e.g. full permitted development applies)	Conservation area w/o article 4
PV	Not a permitted development in a flat. Will need to check that roof can take weight of panel (building regulations). Should be installed no more than 200mm from the roof or wall surface	Permitted development + PROVISIO. Planning consent is required when fitted to the principal or side elevation walls and are visible from the highway
SHW	Not a permitted development in a flat. Will need to check that roof can take weight of panel (building regulations). Should be installed no more than 200mm from the roof or wall surface	Permitted development + PROVISIO. Planning consent is required when fitted to the principal or side elevation walls and are visible from the highway
ASHP	Set to become a permitted development once safety standards etc are agreed. Must comply with building regulations	Not currently permitted – must check with LPA
GSHP	Permitted development. Must comply with building regulations	Not currently permitted – must check with LPA
Biomass	Internal fitting is permitted development. Planning permission currently required for flues, however this is set to change. Small fuel tanks outside are permitted, however larger tanks will need planning permission, this is set to change	In a conservation area or in a World Heritage site the flue should not be fitted on the principal or side elevation if it would be visible from a highway
Wind	Set to become a permitted development for turbines less than 10 metres high freestanding, or not 3 metres above the highest point of the roof for building-mounted turbines. Noise restrictions apply and must be a minimum of (height of turbine + 10%) distance from the edge of the curtail. Building regulations will apply for turbines that are attached to the house	Planning permission will be required where visible from a highway
SWI (int)	Permitted development	Permitted development. Should consult local authority
SWI (ext)	May need planning permission where there is a change in appearance of the building	Planning permission required
Double glazing	Permitted development	Permitted development if material used is like-for-like e.g. wood for wood. Should consult local authority
Low tech window upgrade	Permitted development	Permitted development
Mechanical heat vent recovery	Permitted development	Not sure what this entails but if its all internal then no pp required. Should consult local authority
Loft insulation	Permitted development	Permitted development
Cavity wall	Permitted development	Permitted development
Floor insulation	Permitted development	Permitted development
Central heating	Permitted development. Building regulations apply	Permitted development. Should consult local authority, depending on specific works

Permitted development rights do not apply to flats or maisonettes

#### KEY

Boxes can be filled with:

- 1 Permitted development + provisos  
(e.g. PV in a conservation area = permitted if PV projects no more than 20cm from plane of roof and....)
- 2 Planning permission/listed building consent required  
(could indicate likelihood of acceptability – what kind of design/installation will be acceptable)
- 3 In addition to 2 refer to relevant London decision cases, which set precedents as appropriate  
(to be developed by Group later)

Conservation area with article 4	Listed buildings	Building regulations	Technology type
Depends on nature of A4 – check with LPA	Listed building consent required	Part A, P	PV
Depends on nature of A4 – check with LPA	Listed building consent required	Part A, G, P	SHW
Depends on nature of A4 – check with LPA	Listed building consent required	Part E, P, G	ASHP
Depends on nature of A4 – check with LPA	Listed building consent required	Part E, P, G	GSHP
Depends on nature of A4 – check with LPA	Listed building consent required. Fuel storage will need planning permission to be laid within the curtilage of a listed building. Should check with LPA before a flue is fitted	Part B, F, G, J, P	Biomass
Depends on nature of A4 – check with LPA	Listed building consent required. Planning permission required	Part A, K, P	Wind
Permitted development. Should consult local authority	Listed building consent required. Should consult local authority	Part L, P, F	SWI (int)
Planning permission required	Listed building consent required	Part L, F	SWI (ext)
Depends on nature of A4 – check with LPA	Listed building consent required	Part N	Double glazing
Permitted development	Listed building consent probably not required. Should consult local authority	Part A, L, P	Low tech window upgrade
Not sure what this entails but if its all internal then no pp required. Should consult local authority	Listed building consent required	Part L, P, F	Mechanical heat vent recovery
Permitted development	Listed building consent may be required – check with LPA conservation officer	Part L, P	Loft insulation
Permitted development	Listed building consent required	Part L, F	Cavity wall
Permitted development	Listed building consent required	Part L, P	Floor insulation
Permitted development. Should consult local authority, depending on specific works	Listed building consent may be required – check with LPA conservation officer	Part L, P, G	Central heating

### Building regulations

Part A Structural safety  
(Not covered by Competent Persons Scheme)

Part B Fire safety

Part C Resistance to contaminants and moisture

Part D Toxic substances

Part E Resistance to sound

Part F Ventilation

Part G Sanitation, hot water safety and water efficiency

Part H Drainage and waste disposal

Part J Heat producing appliances

Part K Protection from falling

Part L Conservation of fuel and power

Part M Access to and use of buildings

Part N Glazing safety

Part P Electrical safety

Contact with respect to this report:  
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