

## **Response to “A City for all Londoners” – Energy Efficiency measures Glass and Glazing Federation (GGF)**

### **About the GGF**

The Glass and Glazing Federation is the leading authority for employers and companies within the flat glass, glazing, home improvement, and window film industries, and has approximately 500 members who can be found in over 1,500 business locations throughout the UK. Well over half of the revenues generated from UK window installation are attributable to our members and we are widely recognised as being the UK’s leading authority within the glass and glazing industry.

We welcome this opportunity to submit evidence to the consultation “A City for all Londoners”, and provide our proposals on how the Mayor can move London towards being a zero-carbon city through ensuring every home has energy efficient windows. Energy efficient windows and glazing refers to double and triple glazed windows, rated A+ to C, in homes and commercial buildings, made of performance glass and a range of vital components.

Our expertise and broad membership means we are well suited to support the Mayor in achieving his ambitions for tackling carbon emissions in London and his objective to help Londoners who struggle with rising energy costs by improving the energy efficiency of housing stock.

**We politely request that the GGF is added to the distribution list for the consultation workshops on Housing that the London Plan team will be co-ordinating. Please contact [johnny@gkstrategy.com](mailto:johnny@gkstrategy.com) with further details of the workshops.**

### **Part 1: Promoting energy efficiency**

- Whilst the Mayor is right to state his objective is to ensure new homes should be zero-carbon, we believe that the existing housing stock (over 95% of all domestic properties) must be prioritised when implementing policies to improve energy efficiency. This will support the Mayor to achieve his goal to make London a zero carbon city, as the greatest challenge in terms of energy efficiency is the inefficient existing housing stock.
- The GGF therefore welcomes the Mayor’s ambition to *“treat existing homes, in order to assist more Londoners with their energy bills and reduce carbon in the city”*.

#### **Retrofit**

- Promoting energy efficiency in existing homes in London has numerous economic and social benefits, such as:
  1. **Helping the Mayor to achieve his ambition for London to be a “zero-carbon city”**
  2. **Reducing the cost of living, especially for the fuel poor, by lowering energy costs**
  3. **Helping Londoners to live and work in more comfortable homes and offices**
  4. **Supporting the businesses and jobs within the energy efficiency sector in London**

**5. Contributing towards reducing costs to the NHS by keeping people out of fuel poverty and ultimately out of hospital. Public Health England recently found that 10% of excess winter deaths in 2013 were attributable to fuel poverty<sup>1</sup>**

- Homes are currently being retrofitted at less than half the rate needed to reach the original target of 2.9 million homes retrofitted by 2025 – a target set in the 2011 Climate Change and Energy Strategy.

***Recommendation 1: City Hall should establish a new fund to be exclusively used for tackling the poor record of energy efficiency in the existing residential and commercial building stock.***

**The importance of energy efficient windows and glazing**

- High performance, energy efficient glazing units have been developed through years of investment and innovation in the glazing industry. These have the potential to help save a large proportion of the UK's energy bill in both housing and commercial buildings.
- The National Energy Foundation (NEF) sets out the important role glazing plays in reducing energy loss and carbon emissions.<sup>2</sup>
- The installation of energy efficient windows has not been prioritised by policymakers as a way of maintaining warmth in homes, who instead have favoured funding the insulation and smart technology industries through costly and unsuccessful programmes such as the Green Deal and Energy Company Obligation (ECO).
- We urge the Mayor to acknowledge that the installation of energy efficient glazing plays an important role in contributing towards more energy efficient housing, especially when combined with other measures.
- **The Energy Saving Trust (EST) has estimated that as much as 23% of a home's heat energy can be lost through inefficient windows.**
- The results of a twelve month project completed by the GGF has proven that energy efficient windows in all properties of the existing housing stock would reduce national domestic energy expenditure by 10%, and also reduce national emissions by 10%<sup>3</sup>.
- Further, GGF research found that **average yearly energy bill savings made after installing energy efficient windows in a typical GB house are £256.58 for a Single Glazed House and £124.02 for a Double Glazed House (pre 2002) – a key objective outlined by the Mayor.**
- Therefore, the GGF urges the Mayor to ensure the installation of energy efficient windows and glazing is a key part of his strategy to reduce the carbon footprint of London, reduce energy bills and improve living conditions for London residents.

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<sup>1</sup>

[https://www.gov.uk/government/uploads/system/uploads/attachment\\_data/file/357409/Review7\\_Fuel\\_poverty\\_health\\_inequalities.pdf](https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/357409/Review7_Fuel_poverty_health_inequalities.pdf)

<sup>2</sup> <http://www.britglass.org.uk/publications/glazing-in-buildings-reducing-energy-use-nef-glazing-supply-chain-group>

<sup>3</sup> "F & G banded homes in Great Britain: Research into costs of treatment" Energy Saving Trust, July 2010

## Popularity with consumers

- Improving the energy efficiency of a property is a vital factor in reducing fuel poverty. Energy efficient windows and doors have a vital role to play in this, particularly as they can be attractive to people who might not otherwise install energy efficient measures.
- Trials carried out in advance of the Green Deal in England found that double glazing was one of the most appealing measures for those in fuel poverty (over 85% saw glazing as the preferred energy efficient measure in the Green Deal pilot schemes).
- For example, a trial by Gentoo (further details in Part 2) revealed that double glazing was very popular with customers.
- They reported that windows offered extra benefits to other measures, which made them more likely to install double glazing rather than any other measure.
- Participants in the trial reported feeling an extra sense of warmth and security and noted the importance of double glazing in reducing external sound.
- Retrofitting existing housing stock with a higher standard of glazing also increases the value of the property in question, ensuring its longevity. The provision of glazing is also often a key factor for many people when purchasing a property.
- These benefits could have a significant impact upon whether fuel poor households choose to take up energy efficiency measures and can also encourage householders to adopt a “whole house approach” to energy efficiency. There is no benefit in installing loft or solid wall insulation if heat energy is escaping via old inefficient glazing.

***Recommendation 2: The GGF urges City Hall to ring-fence funding, within energy efficiency programmes, for subsidies that will be used specifically for the installation of energy efficient windows and glazing.***

## Incentivise the industry

- The Mayor has stated he hopes to be London’s “most pro-business Mayor” and the GGF is very keen to work with City Hall to ensure our members, made up of SMEs and large businesses, are sufficiently incentivised to help reach the ambition of reducing carbon emissions and keeping energy bills down for Londoners.
- The Mayor would like to “develop new and innovative approaches” to energy efficiency, and GGF members invest millions into research and development for windows and glazing. We would very much like to work in partnership with City Hall to ensure incentives are in place for more innovative products to be brought to market.
- Currently, sales for windows and glazing, including energy efficient products, are approximately 40% lower across the UK than pre-2007 levels.
- Plainly, the private sector has a key role to play in making London’s homes more energy efficient, but City Hall must work with our industry to ensure consumers understand the benefits of energy efficient windows, and businesses are incentivised to install these products in homes which have previously been overlooked for upgrades to their windows.
- **We therefore propose City Hall uses ring-fenced funding to offset the cost of VAT bills to incentivise consumers to purchase energy efficient windows. Figure 1 clearly shows how we envision the funding being used.**
- In the past, City Hall has run energy programmes such as RE:FIT, funding energy efficiency programmes to reduce carbon emissions in London, and we recommend a new fund is

launched, using the grant provided by central government to the GLA, to tackle poor energy efficiency performance in London's existing housing stock.

- In summary, we are not we are not advocating a reduction in VAT but an 'offset' payment. We believe that this could actually increase the uptake of very high standard glazing and thus increase the overall tax take.

## The costs

- We understand that given the current deficit reduction programme implemented by the UK Government, all public spending programmes must be proven to lead to return on investments and must align with the Mayor's overall vision for the city.
- However, the National Audit Office found earlier this year that the Green Deal cost the taxpayer **£17,000 for each home that was improved with energy efficient measures, but the scheme saved "negligible" amounts of carbon dioxide (CO2)**. Further, the ECO2 scheme cost bill payers £640 million<sup>4</sup> to implement.
- We believe that City Hall should incentivise consumers with a 'tiered' subsidy towards the cost of purchasing and installing energy efficiency windows, dependent on energy efficiency levels as defined by BFRC Window Energy Rating (WERs) bands, where the performance exceeds the minimum standards required by Building Regulations. **The model of the subsidy is shown in Figure 1.**
- **The GGF estimates the total cost of such a scheme would be approximately £13 – £15 million and given the benefits of windows in making homes more energy efficient, this is a modest investment which would lead to London's poorly rated homes becoming some of the most energy efficient stock in Europe.**
- City Hall should examine the Energy Savings' Trust model used in Scotland where grants of 25% are being used to incentivise home owners and landlords to improve the energy efficiency in existing homes and use this as a basis for establishing London's own fund.<sup>5</sup>
- We believe this should be administered by an established trusted and independent legal Government endorsed authority such as the Fenestration Self-Assessment Scheme (FENSA) in partnership with City Hall who would allocate funding depending on the rating.
- FENSA enables companies that install replacement windows and doors to self-certify compliance under Building Regulations without the need for a separate assessment from Building Control.
- FENSA holds data on where approved windows have been replaced in dwellings in England and Wales, and therefore allocating subsidies to the consumers who register new energy efficient windows would be more straightforward if City Hall worked with FENSA – which was originally established with the support of the UK Government.
- Using an approved body such as FENSA would help deter fraudulent claims for subsidies.
- The Mayor would be directly contributing to the following outcomes for Londoners:
  - **Making residents warmer and more comfortable in their homes, substantially increasing the quality of their life**
  - **Enhancing the value of homes across the capital; whilst ensuring longevity**
  - **Helping to reduce energy bills**
  - **Reducing carbon emissions**

<sup>4</sup> <http://researchbriefings.files.parliament.uk/documents/SN06814/SN06814.pdf>

<sup>5</sup> [http://www.energysavingtrust.org.uk/scotland/grants-loans/heeps/heeps-loan-scheme?utm\\_campaign=598435\\_Supplychain\\_Reminder\\_HEEPSpromo%20w%2FCASHBACK%2BAssets\\_Dec2016\\_SB&utm\\_source=Dotmailer&utm\\_medium=EST%20Scot%20email&dm\\_i=2PT0,CTR7,2SSU20,19TSN,1](http://www.energysavingtrust.org.uk/scotland/grants-loans/heeps/heeps-loan-scheme?utm_campaign=598435_Supplychain_Reminder_HEEPSpromo%20w%2FCASHBACK%2BAssets_Dec2016_SB&utm_source=Dotmailer&utm_medium=EST%20Scot%20email&dm_i=2PT0,CTR7,2SSU20,19TSN,1)

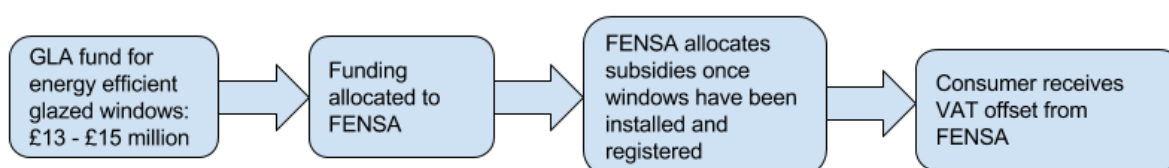
**Figure 1: Flow of funding**

**Figure 2**

Figure 2 demonstrates the savings the consumer could make through City Hall’s subsidy of up to 25% of the cost of VAT depending on the energy efficiency rating of the product installed (A++ being the most efficient). We have also included the overall cost of the subsidy if implemented to cover 50,000 homes.

Energy efficiency rating of window	Cost of window (including installation)	VAT	Total Inc VAT @ 20%	Value of ‘tiered’ subsidy relating to X% of VAT	Value of subsidy relating to X% of VAT	Net cost to consumer	50,000 Homes
A rated	£400	£80	£480	7.50%	£20	£460	£6,000,000
A+ rated	£427	£85	£512	15%	£43	£470	£12,810,000
A++ rated	£486	£97	£583	25%	£73	£510	£21,870,000

**Recommendation 3: City Hall should allocate subsidies through FENSA, and award a ‘tiered’ subsidy to consumers who purchase energy efficient rated windows.**

## Part 2: Case Studies

### Gentoo Green, Sunderland

- To demonstrate the benefits of installing energy efficient windows, and implementing a “whole house approach” strategy, the GGF is keen to draw the Mayor’s attention to the housing association Gentoo who piloted energy efficiency programmes in their 1500 homes in Sunderland.
- Gentoo found that changing from single glazed windows to “A” rated double glazing (energy efficient) windows gave a CO2 emission benefit of between £10 per tonne of CO2 to £23 per tonne of CO2 saved.

- Gentoo also found that *“when the existing windows are of low quality the saving from replacing them is greater...a larger house also means greater savings as there is more opportunity to save heat.”*<sup>6</sup>
- Further to this, Gentoo replaced single glazed windows with double glazed, in homes where elderly residents lived. Following the installation, one resident identified the benefits that were instantly noticeable to the quality and comfort of their life:

*“We have noticed a big difference since the new glazing was put in. The house is now keeping its heat a whole lot better, we feel warmer and more comfortable in our own home.”*<sup>7</sup>

### **Freiberg, Germany**

- The Mayor aspires to be the “Greenest Ever Mayor”, and to achieve this, he must ensure windows and glazing products are central to the energy efficiency strategy that will be published through the London Plan.
- Freiberg, Germany has achieved a notable reputation for energy efficiency measures. Between 1992 and 2007, carbon emissions were reduced by 14%, despite a 10% rise in population.
- Freiburg’s council supplements federal subsidies to homeowners who install triple-glazed windows and other energy-saving features, and from these measures, Freiberg is on course to reduce its carbon emissions levels by 20%, meeting the binding environmental obligations established by the European Union. Freiberg is now widely regarded as one of the greenest cities in the world.
- The GGF urges City Hall to examine the case in Freiberg where public funds have been used strategically used to invest in triple glazing products, which have brought about substantial reductions to emissions.

## **Part 3: Planning Framework**

- With the extension of Permitted Development Rights (PDRs), we are keen that the Mayor creates a planning framework – through the London Plan – that will stop local authorities forbidding the replacement of old windows for energy efficient windows where there would be no detriment to the external appearance of the building but there would be a detrimental effect on the building and its energy efficiency.
- Replacement windows and doors are allowed within the rules of PDRs provided they are of “similar appearance”, however when an Article 4 Direction is issued on an area or individual property, the ability to replace with windows or doors of similar design and appearance without planning consent is removed.
- The GGF recognises and fully supports the protection of the character of historic buildings and the character of conservation areas. However, our members are very concerned that Article 4 Directions are being applied in many instances where they are unnecessary.
- Although this is a responsibility for local authorities to issue Article 4 Directions, we believe the Mayor must use the London Plan to encourage local authorities to permit energy efficient windows to be installed which do not damage the appearance of buildings across the capital.

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<sup>6</sup> <http://www.gentoo-group.com/media/1062847/retrofit-reality-1.pdf>

<sup>7</sup> <http://www.sunderlandccg.nhs.uk/news-media/news/gentoo-group-launch-boiler-on-prescription-pilot/>

- We would be delighted to discuss this more at the Housing Workshops to be held by City Hall, to explore how the planning framework can support the Mayor's ambition to reduce carbon emissions and help low income households who struggle with energy bills.

***Recommendation 4: Use the London Plan to encourage London Boroughs to reduce the number of unnecessary Article 4 Directions that are issued which stop consumers being able to install energy efficient windows and glazing.***

## **Part 4: Conclusion**

- In summary, the Mayor of London must urgently address the poor energy efficiency ratings of London's existing housing stock to achieve the objectives to reduce energy bills and reduce carbon emissions, by immediately focusing on the following recommendations:
  1. Establish a new £13 – 15 million fund to be exclusively used for tackling the poor record of energy efficiency in the existing private and public housing stock.
  2. Ring-fence funding, within energy efficiency programmes, for subsidies that will be used specifically for the installation of energy efficient windows and glazing.
  3. Allocate subsidies through FENSA, and award a 'tiered' subsidy to consumers who purchase energy efficient rated windows that exceed minimum requirements (as set out in DCLG's Approved Document L).
  4. Use the London Plan to encourage London Boroughs to reduce the number of unnecessary Article 4 Directions that are issued to ensure energy efficient windows are used when upgrading the current housing stock.

The Glass and Glazing Federation, December 2016

## **Appendix 1: Fund Overview**

<b>SUMMARY OF WINDOW INCENTIVE SCHEME FUND</b>	
<b><u>Overview:</u></b>	A new £13 – £15 million fund to be exclusively used for tackling the poor record of energy efficiency in existing domestic and commercial housing stock.
<b><u>Fund:</u></b>	<ul style="list-style-type: none"> <li>• City Hall uses ring-fenced funding to offset the cost of VAT bills to incentivise consumers to purchase energy efficient windows.</li> <li>• Whilst VAT levels are the responsibility of the UK Government and the European Union, City Hall should pay subsidies to consumers to effectively eradicate their VAT bill.</li> <li>• A ‘tiered’ subsidy would be allocated to consumers based on the efficiency rating of the product installed, therefore incentivising consumers to install the highest rated products (A++ being the most efficient).</li> </ul>
<b><u>Administration:</u></b>	This could be administered by Fenestration Self-Assessment Scheme (FENSA) in partnership with City Hall who would allocate funding depending on the rating.
<b><u>Impact:</u></b>	<ul style="list-style-type: none"> <li>• Making residents warmer and more comfortable in their homes, substantially increasing the quality of their life</li> <li>• Enhancing the value of homes across the capital</li> <li>• Helping to reduce energy bills</li> <li>• Reducing carbon emissions</li> </ul>