

Response to New London Plan consultation

2nd March 2018

Context

In the UK and Ireland, Baxi Heating has a portfolio of some of the best known and most respected brands in the heating industry. We provide integrated solutions for domestic and commercial heating and hot water including boilers, electric water heating, solar thermal, combined heat and power, controls and digital applications. We have a proud history of UK manufacturing and have been producing high efficiency heating and hot water solutions for over 150 years.

We welcome the opportunity to respond to this consultation and hope to provide input into development of the revised technical guidance which will be required. With relevance to the London Plan key topics for our business are the development of heat network solutions together with reducing carbon emissions through deployment of CHP; as such our response will focus on these areas.

As members of the Association for Decentralised Energy (ADE) we fully support and concur with their response to this consultation, some of which is reflected in the below.

Heat Networks

As recognised in work from both BEIS and the Committee on Climate Change, heat networks have a significant role in the decarbonisation of heat required to meet nationally binding emissions targets. We welcome the strong recognition of the importance of expanding heat network development in London. It is imperative for the overall economies of scale, and development of design and delivery capability that the technology options for delivery of heat to new and existing heat networks are consistent across the country and it should be open to designers to choose the best solution for a given application.

Heat networks can deliver important local power network services and act as key mechanism in supporting the wider decarbonisation ambition of the GLA, again technology choice should be maintained in order to arrive at best outcomes. Encouraging thermal storage will work to ensure that such opportunities are maximised.

Combined Heat and Power (CHP)

We welcome the recognition in the New London Plan of the important role of CHP in the expansion of heat networks. The value of CHP in London's energy future is not confined to this market. As the CHP sector continues to innovate, we anticipate that it has a key role in delivering the objectives of the London Plan.

Gas CHP plays a significant role in reducing carbon emissions. Whatever fuel is used, CHP represents the most efficient energy generation of that fuel. CHP using natural gas saves carbon by generating heat and power up to 30% more efficiently than other thermal power stations, and by pushing higher carbon thermal power stations out of the market.

The carbon emissions factor for grid electricity can vary over the course of the day, depending on the power stations operating at each half hour. Balancing of electricity demand and supply is provided on a daily basis by thermal generators, such as coal and gas power plants. Government modelling

shows that gas CHP will continue to reduce emissions even at very high penetrations of renewable and low carbon energy until the point where its power output exceeds that of other fossil fuel plant, an extremely unlikely scenario. Furthermore, those that are flexible can help address high grid carbon intensity periods.

Therefore, effectively whenever gas or coal is on the electricity system, gas CHP will continue to deliver substantial energy and carbon savings. Other forms of CHP such as waste to energy and renewable CHP can deliver even greater emissions reductions. This means that CHP will continue to provide fuel and carbon savings against the alternative generator, which will be coal and gas generation until 2025, and then gas only through the 2030s. The Government modelling also found that gas CHP will save carbon emissions far into the 2040s and beyond if it is exposed to the wholesale price, as is the case with many schemes.

Unlike minimum technology or emission requirements applied at the source, the requirement for air quality neutrality (or positivity, where relevant) is the benchmark that London's new buildings should be held to, as it is the one which most directly measures real world impacts.

The dispersal of emissions from a CHP can result in improved street-level NOx emissions. The recognition of CHP's air quality benefits requires an accurate and appropriate measurement of NOx produced from CHP plants. It is not effective policy to compare NOx emitted in a dispersed and high level manner from CHP with that from low-level traffic or non-dispersed boiler emissions. In many cases, CHP with well-designed high level dispersion can lead to lower local NOx concentrations than ground level boilers. Future policy needs to account for this dispersion to ensure fair comparison and ensure Londoners receive an optimal air quality outcome. Proposals for larger CHP compared to an ultra-low NOx boiler should allow for dispersal modelling of NOx to ensure the comparison is based on the impact on local residents at street level, in line with the aims of the London Plan.

For smaller single building scale CHP, up to 50kWe output, forthcoming changes to the Ecodesign of Energy Related Products Directive (ErP), effective from September 2018, will require manufacturers to meet very low levels of NOx emissions, yet appropriate to the technology and achievable in practice. We would suggest that future technical guidance reflects these new standards and perhaps gives guidance for what is appropriate for different scales of CHP plant.

Given the overarching national requirement to reduce carbon emissions we would reiterate that CHP offers one of the most cost effective and efficient means to deliver on this ambition, it is imperative that local policy addressing other concerns does not have the unintended consequence of limiting deployment.

For further information please contact:
