November 2017

Draft London Environment Strategy:

UKGBC consultation response

The UK Green Building Council is an industry network with a mission to radically improve the sustainability of the built environment, by transforming the way it is planned, designed, constructed, maintained and operated. As a charity with over 400 member organisations spanning the entire sector, we represent the voice of the industry's current and future leaders who are striving for transformational change.

We strongly welcome the overall vision and principles of Environment Strategy, setting out a clear plan for driving the transition to a zero carbon city. We also welcome the commitment to an integrated approach to climate change mitigation, adaptation and quality of life for residents which will balance the priorities of reducing emissions with creating better places, addressing fuel poverty, and improving the health and wellbeing of Londoners.

Achieving these objectives will involve working closely with businesses to develop effective policy and implement solutions which are currently outside of the Mayor's powers. In our response we focus on a range of areas where we believe ambition could be tightened for construction and property.

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Targets and metrics

City-wide carbon budgets will provide a clear framing for decarbonisation efforts, but further clarity will be needed to ensure individual sectors are on track to deliver reductions. The Mayor should introduce high-level emissions reduction targets for the whole of London's built environment which would sit across all policies for buildings and construction. These targets should be derived from the Carbon Budgets and would provide clear five-year interim targets on the trajectory to zero carbon.

The built environment targets should be made up of six sub-sector targets, consisting of capital and operational targets for infrastructure, and commercial buildings and domestic buildings. These sub-sector targets should be based on the realistic contributions they could make to the sector-wide target and would therefore provide further clarity to help inform policy decisions and industry action.

It is equally important that there is a robust process for monitoring progress towards these targets by a relevant industry-facing body, which would establish a feedback loop for the industry and facilitate the spreading of best practice. This could be enabled through measures to encourage the disclosure of energy use data, for example a requirement in the London Plan for new buildings or a voluntary agreement with major businesses (see below).

New build regulations

Net zero carbon

We strongly welcome the commitment for all new buildings in London to be zero carbon from 2019. But achieving a zero carbon capital will require setting a future trajectory of tightening new build standards

beyond this level. The global Advancing Net Zero campaign[1] has set out the contribution that will be needed from the built environment to achieve the Paris Agreement and is calling for all new buildings to be net zero carbon in operation from 2030. The Mayor should set out a trajectory to achieve this goal in London and we would welcome the opportunity to work together in developing a net zero standard which would cover all energy use and be based on actual metered energy rather than projections.

Energy use targets[2]

In line with building performance standards used internationally, a kwh/m2 energy use target should be introduced which would include both regulated and unregulated energy and would replace the current CO2 emission compliance methodology. To demonstrate compliance with the target, energy usage for all new buildings should be disclosed annually which would be displayed on a public online platform along with the predicted energy performance in kWh/m2 from the energy assessment. This will provide a transparent mechanism for increasing awareness and understanding the performance gap for new properties. A requirement for disclosure would be delivered through the Section 106 agreement to include an obligation for the developer and building owner to facilitate the collation of energy data for the first 5 years of occupancy.

Fabric energy efficiency target

Alongside the energy use target, the energy hierarchy should be maintained with the use of a fabric energy efficiency target which takes into consideration both heating and cooling. An efficient building fabric drastically reduces energy consumption, makes the building more resilient to weather extremes and decreases the risk of 'locked-in' inefficiency compared to the use of efficient building services. The fabric standard could be based on the recommendations from the Zero Carbon Hub for their proposed 2016 standard for building regulations.

Peak demand reduction

As the electricity grid decarbonises, using electricity to generate heating and domestic hot water becomes a cost effective and low carbon solution. However, electric solutions for building services will put growing pressure on the electricity grid, exacerbated further by increasing demand from electric vehicles. It is therefore important to dis-incentivise consumption during peak periods or provide complementary systems onsite to meet potential peak demands – whether through battery storage, thermal storage and other smart demand management systems.

The Energy Strategy for new development should clearly demonstrate how peaks will be reduced and what peak reducing measures will be incorporated as part of the building operation. Appropriate guidance should be made available to designers to ensure desired outcomes. This information should be used by the GLA to understand what peak reductions can be achieved for different types of development and mandatory peak reduction targets could be introduced in the future.

Embodied carbon

The Draft Environment Strategy highlights the growing importance of embodied carbon with reductions in onsite emissions. There is already wide agreement in the industry on the standard methodology developed by RICS[3] and the new iteration of BREEAM will also take this into account. This provides an opportunity for

[1] http://www.worldgbc.org/news-media/thousands-billions-coordinated-action-towards-100-net-zero-carbon-buildings-2050

[2] For more information, refer to the recommendations of the London Energy Transformation Initiative: https://www.leti.london/

[3] See forthcoming guidance from RICS, due to be published in January 2018.

the London Plan to promote far more widespread and accurate measurement of embodied carbon in built assets, as a critical first step towards reductions.

Planning applications for schemes referable to the Mayor should include requirements to minimise embodied carbon dioxide emissions by undertaking an embodied carbon assessment in line with a nationally recognised methodology e.g. RICS/BREEAM. Applications should also demonstrate that reductions of the carbon impacts of the built asset have been implemented through the design and site phases. This should be considered as a first step towards reporting on embodied energy for all new developments, so we also recommend exploring ways in which measurement in non-referred schemes could be encouraged with a view to extending reporting requirements in the future.

While measurement is a significant step forward for developments, the introduction of financial incentives may also make developers more likely to take action on this issue. One option would be to include verified embodied carbon reductions as a carbon offset, where it can be demonstrated that the emissions to be offset go beyond best practice or a nationally recognised notional benchmark. The planning applicant would have to verify the additionality of reductions, using established methods, and against an agreed benchmark where possible. The LLDC through its Local Plan SPG has pioneered an approach for a carbon offset fund which includes embodied carbon as an option to reduce offset payments over a 30-year lifecycle. The GLA could consider a similar scheme.

Home retrofit

We welcome the commitments to extend the RE:NEW programme and also to undertake pilots of the Energy Leap initiative. London should try to encourage new approaches to whole home retrofit and area-based which can provide significant improvements in energy performance as well as improving health, wellbeing and quality of life for residents. A whole home approach will offer the greatest benefits to residents with a single intervention. Indeed, the projections for retrofitting 100,000 properties a year in London presuppose the use of whole home solutions, rather than a measure-by-measure approach which would require multiple interventions for each property. London has the opportunity to lead the way on whole home solutions and support the development of a high quality multi-skilled construction supply chain in the capital.

The Mayor should work with London Authorities to pilot the approaches for retrofit-led regeneration proposed by UKGBC's recent industry task group[4]. These pilots would target low income areas in need of regeneration but where redevelopment may not be appropriate. Building on the Energy Leap pilot, a retrofit-led regeneration project could see these whole home solutions rolled out to entire communities alongside improvements to the public realm, transport and amenities. This approach has the benefit of creating a flagship London retrofit project demonstrating the benefits not just for energy and carbon savings but also for social and economic factors such as increased property values, enhanced security and community pride and improved health and wellbeing of residents.

This area-based approach to delivery will mean ensuring that all household have access to finance for whole home improvements, regardless of tenure and income. The Mayor should consider establishing a London-wide loan fund for owner occupiers and private landlords to access low cost finance with affordable and flexible repayments. In line with the recommendations of the Regeneration and Retrofit Task Group, local authority charges attached to properties would enable a form of equity release repayments, which could provide sufficient funding for whole home improvements and allow residents to directly benefit from rising property prices in the capital.

[4] https://www.ukgbc.org/ukgbc-work/retrofit-led-regeneration/

At the same time, the Mayor should also engage with London's financial sector to pilot approaches to green mortgages which would enable homeowners to renovate their properties. Projects such as LENDERS[5] and the Energy Efficient Mortgage Action Plan[6] are demonstrating that low energy properties have lower risks of mortgage default due to the lower running costs and increased property values of renovated properties. Pilots should build directly on these approaches and could be linked to the delivery of Energy Leap solutions and energy performance guarantees.

Business energy use

Building energy use represents a significant portion of business emissions in London so it is crucial that the Mayor works collaboratively with the commercial buildings sector to significantly improve energy efficiency. In line with the built environment sector carbon targets outlined above, the Mayor should set out a trajectory for reducing emissions from commercial buildings alongside the London carbon budgets. This would provide clarity to businesses about what will be expected from them to contribute to a zero carbon capital.

Progress against these targets should be measured by encouraging public disclosure of operational energy data for all non-domestic buildings. This form of disclosure would help to drive action among building owners and tenants who will be able to better understand their energy use and make comparisons with their peers. Where possible, this approach should build on existing projects, such as the Design for Performance initiative, to develop better benchmarks and granular ratings for shared and tenanted parts of buildings.

London currently does not have the powers to mandate disclosure, so the GLA should actively investigate how it could incentivise the use of a consistent disclosure tool and thereby help to normalise the widespread disclosure of data. This could include a range of measures include a voluntary agreement with major businesses and suppliers to local authorities to publicly disclose annual energy use, alignment with the London Plan for reporting against a kWh/m2 energy use target in new buildings (see above) and use of public procurement to drive these approaches in new and existing public buildings.

[5] http://www.epcmortgage.org.uk/
[6] http://energyefficientmortgages.eu/