Find out more about...

The London Plan energy requirements

The London Energy Assessments

Planning applications for projects in London are required to submit an Energy Assessment, to show how the project will be compliant with London Plan Policy 5.2 and the energy hierarchy 'be lean', 'be clean' and 'be green'.

Domestic Projects

As of 1 October 2016, domestic projects classed as major developments (10 or more homes) need to comply with policy 5.2B which relates to zero carbon for residential development. Despite the Government removing the requirement for all homes to be zero carbon by 2016, the London Mayor has kept this requirement so that London is prepared for the introduction of Nearly Zero Energy Buildings (NZEB) by 2020.

Energy assessments are required to demonstrate how the residential aspect will achieve at least a 35% reduction in regulated CO_2 emissions beyond Part L 2013. The remaining 65%, to equal a total of 100%, is to be offset through a 'cash-in-lieu' contribution.

This cash payment is set at Borough level, and the Mayor's Sustainable Design and Construction SPG recommends £60 per tonne of CO_2 for a 30 year period, which is a figure commonly adopted by London Boroughs.

Non-Domestic Projects

The zero carbon requirement does not apply to non-residential schemes. These developments must demonstrate a 35% reduction in regulated CO_2 emissions beyond Part L 2013.

Be Lean, Be Clean, Be Green

This term refers to the 'energy hierarchy'. Projects should firstly reduce the energy demand, and therefore CO_2 emissions, through improvements to the fabric, such as better U-values and air tightness - 'be lean'. Then, connection to heat networks or CHP should be explored, with further savings attributed to 'be clean'. Finally, renewable technology systems should be the final step to make even further savings, which is known as 'be green'.

Once all of these have been calculated, it should result in a 35% improvement from the baseline Part L 2013 figures.

Overheating Analysis

The London Plan in most cases also requires projects to undertake dynamic modelling to assess the risk of overheating. Basic SAP or SBEM is not able to do this enhanced level of analysis, and our specialist Building Physics team uses IES Virtual Environment which is compliant dynamic modelling software.

How Method can help your project

Our energy and sustainability team can carry out the calculations to advise you on the appropriate ways to reach the London Plan targets, and advise you of the cost of cash payments. Method's team is proactive and approachable, and we pride ourselves on working hard to make the planning energy requirements easier to digest.

Our modelling team is very experienced in overheating analysis, where we build a dynamic computer model of your building and conduct detailed thermal comfort analysis. This also includes corridor overheating.

Examples

Example A: MVHR, ACDs throughout	
U-values	
External Walls	0.16 W/m²K
Party Walls	0.00 W/m²K
Floor	0.10 W/m²K
Roof	0.11 W/m²K
Windows	1.40 W/m²K
Doors	1.40 W/m²K
ACDs	All applicable (lintels, sills, jambs, ground floor, intermediate floor, eaves, gable, corners)
Ventilation	MVHR
Air Permeability	3 m³/hm²
Space Heating	Gas Combination Boiler
Boiler Efficiency	89.50%
Water Heating	From Space Heating
Renewables	1.75 kWp PV (7no. 250W panels)

Example B: Natural Ventilation, few ACDs	
U-values	
External Walls	0.15 W/m²K
Party Walls	0.00 W/m²K
Floor	0.10 W/m²K
Roof	0.10 W/m²K
Windows	1.00 W/m²K
Doors	0.80 W/m²K
ACDs	Lintels, sills, jambs
Ventilation	Natural Ventilation
Air Permeability	4 m³/hm²
Space Heating	Gas Combination Boiler
Boiler Efficiency	90.00%
Water Heating	From Space Heating
Renewables	2.25 kWp PV (9no. 250W panels)

Example A	
TFEE	57.7
DFEE	**47.6**
DFEE < TFEE?	✓
TER	15.97
DER before PV	15.11
DER with PV	10.37
DER before PV < TER? (Be Lean)	✓
CO_2 Reduction with PV	35.10%
CO_2 Offset Payment	£3,088.66

The case study above requires the use of Accredited Construction Details (ACDs) in order to achieve the initial 'be lean' requirement for the London Plan. ACDs require careful detailing in order to avoid thermal bridging (see Method's Guide to Thermal Bridging for more information).

Example B	
TFEE	58.9
DFEE	54.0
DFEE < TFEE?	✓
TER	16.21
DER before PV	16.20
DER with PV	10.11
DER before PV < TER? (Be Lean)	✓
CO_2 Reduction with PV	37.70%
CO_2 Offset Payment	£3,011.22

In this example, where natural ventilation is preferred, a larger amount of PV is required to help achieve the minimum 35% reduction. Additionally, the use of fewer ACDs would further impact performance, resulting in a requirement for significant improvements in fabric efficiency and much lower U-values.