

Energy Management and Heating in LFB premises

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Owner: **Assistant Director, Property and TSS**
Responsible work team: **Technical Assurance Team**

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1 Introduction

- 1.1 This policy is intended to ensure that best practice for energy management is applied throughout the LFB estate. The policy will apply to the design, maintenance, and operation of all LFB buildings. The energy policy forms part of the carbon net zero strategy of achieving net zero by 2030. It also will enable an improved understanding by occupants of LFB premises of the legal parameters which affect the heating temperature of internal workplaces.
- 1.2 The policy provides information and guidance on:
 - Good housekeeping practice by building occupiers to conserve energy and how buildings are to be operated to ensure that energy wastage is minimised, and the use of renewable technologies is maximised. Appendix 1 refers.
 - Provide guidance to senior management and occupants of LFB premises regarding the heated internal space temperatures that may be expected in normally occupied workplaces.
 - Provide conditions which meet reasonable standards of thermal comfort whilst also addressing the need to manage the LFB's carbon footprint and expenditure on energy.
 - Control the revenue expenditure of LFB's energy costs, which due to the volatility in the energy market beyond LFB's control, can increase dramatically.

2 Policy aims

- 2.1 Ensure that LFB maintains its estate efficiently and in accordance with statutory requirements, given the constraints of an operational fire station and its initial design and footprint.
- 2.2 To progressively replace all building services that consume energy with zero carbon energy consuming plant and equipment.
- 2.3 To improve the fenestration of premises to decrease energy losses.
- 2.4 To invest in renewable technologies that decrease LFB's dependence on fossil fuels and maintain these in full working order and achieve revenue generation through registering for government backed generation schemes where available.
- 2.5 All design work for fire station refurbishments and new build schemes shall be in accordance with the station design brief (SDB) with the aim of achieving zero carbon emissions from LFB premises.
- 2.6 To encourage the persons in control of LFB premises to monitor energy (and water) usage at their premises and have access to energy consumption data to ensure the premises are being operated in an efficient manner.
- 2.7 Seek to meet the mayor's carbon emissions reductions targets of being carbon net zero by 2030.
- 2.8 To complete Display Energy Certificate (DEC) inspections at all premises over 500m² and at five yearly intervals to all premises below 500m² and to ensure that the certificate is passed to the person in control to display within the public area of the premises.
- 2.9 Where practical achieve an "excellent or good" BREEAM rating (building research establishment environment assessment method), based on full life cycle costing.
- 2.10 Provide conditions which meet reasonable standards of thermal comfort whilst also addressing the need to manage the LFB's carbon footprint and expenditure on energy.
- 2.11 To aim to continually reduce energy and water consumption across the Brigade, based on a like for like operation (additional energy requirements such as electric vehicle charging impact to be assessed separately).

- 2.12 Raise all employee's awareness of the need to save energy and water through good housekeeping. Raise further awareness of the energy portal which can be used to assess energy performance at every premise.
- 2.13 Maintain and develop the building energy management system, along with the energy portal, and use the systems to optimise energy use and operation.
- 2.14 Maintain an effective energy monitoring and targeting system to record energy and water usage and expenditure.
- 2.15 Monitor and maximise the percentage of renewable energy, and ensure feed in tariff's are obtained.
- 2.16 That TSS Property Group ensure designers identify the options for:
 - Reducing energy demand through design, ensure energy is supplied efficiently and use low or zero carbon technologies to reduce energy dependency.
 - Reducing water demand and ensure that water is supplied efficiently.
- 2.17 Ensure suppliers and contractors use sustainable timber in all works. All timber is to have FSC certification to ensure the timber has been sourced from a responsibly managed forest by tracking parcels of timber from forest to end user and stopping illegal trade.

3 Heating

Indoor space temperature heating limits

- 3.1 The Workplace (Health, Safety and Welfare) Regulations 1992, regulation 7 states that during working hours, the temperature in all workplaces shall be reasonable. The Approved Code of Practice states the temperature in workrooms should provide reasonable comfort and this temperature is specified as 16°C, except where the work involves severe physical effort when the temperature shall be 13°C. Workrooms are defined as places where people normally work for more than short periods.
- 3.2 Other factors apart from temperature will have an effect on the feeling of thermal comfort, draughts or air movement can increase the feeling of discomfort. Different temperatures will apply to air-conditioned buildings due to increased air movement – see paragraph 4.11.

LFB indoor space temperature heating policy

- 3.3 It is expected that occupants of buildings will take reasonable measures to adapt to the environment by wearing suitable clothing and show due tolerance and understanding, especially if they are in buildings that are not constructed to modern standards. LFB has made considerable investment in improving the thermal performance of its buildings with cavity wall installation, double glazing, automated building services and improved roof insulation.
- 3.4 It is also expected that individuals will:
 - Accept their view of an acceptable temperature may not be the same as other users of the building.
 - Not interfere with the automatic control of building services.
 - Maintain and ensure that all building services plant room are kept locked and secure with keys being kept available at all times. Ensure that only authorised persons enter these areas.

- Keep heat in the building by closing windows in cooler weather conditions and keeping external doors closed.
- Be aware that heating systems will pulse on and off to maintain the required temperature of 19°C. Radiators will not always be hot or warm as circulation pumps will shut down once the premises is at 20°C.
- Be aware that heating systems will shut down if the internal temperature is met at 20°C and the external temperature is at 16°C.
- Be aware that the heating system will operate 365 days a year if the internal temperature is below 20°C and the external temperature is below 16°C.
- During the autumn personnel may feel cold due to the fluctuating outside temperatures and they should be encouraged to wear appropriate clothing within the premises.
- Ensure radiators and convectors are not blocked with furniture, clothing, towels etc.
- Ensure that the radiators thermostatic valves are set correctly, and rooms not used are turned down.
- Ensure that all windows and doors are closed in all rooms if the external temperature is below 16 °C.
- The use of temporary heating will be restricted to emergencies only.

Temperature requirements

- 3.5 LFB will endeavour to generally maintain a working time space temperature of 19°C in naturally ventilated premises which are normally occupied, except for infrequently used areas or areas where it is not necessary or reasonable to maintain such temperatures e.g. appliance bays.
- 3.6 This temperature includes incidental heat gains, but this temperature range cannot be provided if windows and external doors are left open. The temperatures specified for LFB premises are based on the Chartered Institute of Building Services (CIBSE) guidance, where appropriate.
- 3.7 Drying rooms temperatures are not included in this temperature range.
- 3.8 Generally heating systems will operate to maintain the internal temperature in a workroom within the design temperatures detailed in paragraph 3.4.
- 3.9 Premises which are occupied 24/7 will generally be maintained at 19°C. Temperatures in areas which are not occupied 24/7 will be set back outside of the normal occupation periods to 12°C. For premises not occupied 24/7 the times of heating will normally be 0730 hrs to 1800 hrs unless a specific request is made to amend these times.
- 3.10 Heating systems must be switched off before any cooling system is operated and where necessary LFB will install interlocking controls to ensure they do not run in tandem.
- 3.11 The design levels (of indoor space temperatures) for areas in LFB premises are detailed in the station design brief. Some examples are listed below.

Area	Heating maintained temperatures °C
Appliance bays	Normally 5°C but controlled to 8°C when the external temperature is below 0°C. A boost facility to 8°C when external temperature is above 0°C. Appliance bay doors must be closed.
Drying rooms	18
Station offices	19
General offices	19 (21 air-conditioned premises)
Resting areas	19
Toilets	19
Corridors and Staircases	15

4 Energy Management role in becoming Carbon Net Zero (CNZ)

- 4.1 Energy Management has an important role to play in LFB's road map to carbon net zero (CNZ), and will feed into the CNZ team in terms of consumption, cost and carbon performance.
- 4.2 The CNZ strategy for premises includes phasing out gas fired plant and equipment, and replacing with electric. This generally entails replacing gas fired heating boilers with air source heat pumps, and gas ovens and hobs with electric catering equipment.
- 4.3 A phased approach is in place to replace gas fired equipment, with a number of projects planned up until, and past , 2030. However, there will be occasions when plant replacement is required in an emergency or following a breakdown. In this case, the equipment should be replaced with electric wherever feasible taking account of the situation.
- 4.4 Where a building becomes CNZ, and there is not a requirement for a gas supply, the gas meter and supply should be removed to eliminate the need to pay standing charges to the gas supply company, and the meter operator. Advice should be sought from the Technical Assurance team on this process.

Appendix 1 - Energy housekeeping

- 1 The following are examples of how small actions by individuals can combine to make significant overall savings:
 - (a) Turn off radiators when not required. Do not open windows and doors to reduce temperature while the heating system is in operation.
 - (b) Do not use portable heaters to boost internal temperatures. Portable heating will be supplied only in the event of the failure of the normal heating system, or during maintenance or refurbishment works. Do not bring in heaters from home.
 - (c) Cooling systems are not to be operated during periods when the heating is operating except for process cooling e.g. server cooling systems or buildings.
 - (d) Ventilation and comfort cooling systems must only operate for times when there is an actual need; windows must be closed when comfort cooling is operating.
 - (e) Turn off all unused lighting, particularly in appliance bays, toilets and store cupboards when not in use.
 - (f) Make sure that all external yard lighting is turned off during daylight hours. Use at night only when required for security purposes.
 - (g) Computer monitors must be turned off when staff are away from their desks for long periods i.e. lunch breaks, meetings etc. Screen savers do not save energy.
 - (h) Use double sided photocopies of documents wherever possible.
 - (i) Photocopiers and printers must be turned off at night and at weekends. Do not leave this equipment or TV's on 'stand by'.
 - (j) Do not leave taps running on basins and sinks. Use plugs and chain to fill the sink or basin.
 - (k) Report any dripping taps to the Property Portal.
 - (l) Isolating valves for external taps must be turned off particularly in winter to prevent freezing and burst pipes.
 - (m) Turn off battery and mobile phone chargers when these do not need to be on.
 - (n) Only LFB electrical equipment is to be used.

Note: This section is aimed at all LFB staff both uniformed and non-uniformed. It applies to operational fire stations, administration buildings, training facilities and workshops. It sets out to raise awareness of energy use and to promote savings by good housekeeping methods. It highlights where savings can be made both financially and in reducing our impact on the environment through the sensible use of gas, water, and electricity.

Appendix 2 - Heating information

LFB Policy – tampering with controls

- 1 Any tampering of the automatic controls will be reported to senior management with evidence, which may result in disciplinary action. It should be noted that any tampering of the heating controls that leads to a loss of revenue by the LFB will be treated very seriously.

Operation of automatic heating controls

Main offices

- 2 Except when a heating refurbishment project is underway temperatures will normally be maintained at 19°C 24/7.

Appliance bays

- 3 Appliance bays are not normally occupied work areas and therefore no heating would normally be required, however, to assist operational effectiveness they are normally heated to 5°C, except in extremely cold conditions (when the outside temperature is below 0°C) when the temperature will be maintained at 8°C.
- 4 Appliance bays are only heated when the appliance bay doors are closed.
- 5 There is a user boost facility to maintain 8°C for a period of 30 minutes for training purposes. It is extremely costly to heat appliance bays and any tampering of the controls shall be treated very seriously by the LFB.
- 6 Appendix 3 details the actions to be taken by the maintenance provider when investigating a heating complaint.

Notes:

1. The person in control of the premises should be aware that radiators will not always be hot or warm as the heating circulation pumps will shut down once the temperature in the premises has reached 19°C. During autumn personnel may feel cold due to the fluctuating outside temperatures and they should be encouraged to wear appropriate clothing within the premises.
2. The person in control of the premises needs to be aware that unnecessary calls to the maintenance provider incur charges to the LFB and therefore all complaints need to be justified through use of the appropriate form at appendix 2.
3. The person in control of the premises is responsible for ensuring that no tampering of the heating system is undertaken by any personnel at LFB premises.

Appendix 3 - Provision of temporary heating in LFB premises

Background and hazards from temporary heating

Background

- 1 The intention is to have efficient, fully operational, fixed heating systems within all our buildings which provide heating to the target temperatures, thus eliminating the need to rely on the inefficient use of temporary supplementary heating.
- 2 Temporary heaters may be introduced to LFB premises, either as a reactive response to break downs or, alternatively, as part of larger planned maintenance projects.
- 3 Only the Property FM Team has the authority to authorise the use of temporary or supplementary heating using portable heaters. If a problem with the heating system is confirmed and cannot be rectified within a reasonable timescale then the FM team will arrange the provision of supplementary heating as appropriate via its contractors. The aim will be to minimise the use of temporary heating and to remove the portable heaters as soon as possible.

Procedure for managing the provision of temporary heating

- 4 Temporary heaters may be introduced to the normally occupied parts LFB premises when the fixed heating system is not in service or cannot maintain the essential conditions for thermal comfort either as a reactive response to break downs or, alternatively, as part of larger planned maintenance projects.
- 5 Normally occupied areas in the premises which will be heated for the times they are used will include:
 - Resting areas including television rooms
 - Dining areas
 - Watch rooms
- 6 Normally occupied areas exclude:
 - Appliance bays
 - Corridors
 - Staircases
 - Storerooms etc.
- 7 Station Commanders are responsible for fire safety at the premises and must be advised by the Property Group lead person (Contract Administrator) of the need to provide temporary heating, and the need to review the premises fire risk assessment. The Property Group lead person may by agreement with the Station Commander contact the Fire Inspecting Officer for the premises to arrange a review of the fire risk assessment.
- 8 All authorised temporary heaters used on LFB premises will be maintained by a competent person and evidence of maintenance together with instructions for their safe use will be provided.
- 9 Unauthorised portable electrical heaters must not be brought on to LFB premises or used under any circumstances. All unauthorised portable heaters are to be removed by the Person in Control of the Premises.

- 10 The circumstances requiring the issue of the heater(s) will be recorded and investigated by Property Group contractors and a regular review of the performance and operation of the heaters will be carried out.
- 11 The Property Department FM team will keep station staff and other premise users informed of progress in restoring the normal heating system.
- 12 Guidance on the safe and effective use of the heater(s) will be provided. Staff will need to ensure the safe and effective operation and storage of the appliances, which should not be moved (unless agreed) from the areas or rooms where they have been installed, due to electrical loading considerations.

Electric portable heaters

- 13 The fire hazard is less than with LPG fuelled portable heaters, but there is a serious risk of damaging the electrical installation by overloading one or more of the phases of the three phase supply.

The limitations of electrical supply capacity in some LFB premises, require the existing electrical supply to be assessed, prior to the use of portable electrical heating.

Preferred electric heaters include:

- Compact industrial fan heaters.
- Ceramic electric heaters.
- Halogen heaters remembering these do produce light which might be undesirable.

Paraffin heaters

- 14 Must not be used.

Guidance for premises staff where temporary heaters are required

- Take all reasonable steps to retain heat within the building such as by closing doors and windows as appropriate.
- Recognise that there will be technical, cost and safety limitations on the amount of temporary heating that can be provided.
- Help to maintain fire safety by minimising the number of gas cylinders used/ stored inside the station.
- Accept that use of electric heaters may need to be staggered in different rooms in the premises to prevent electrical overload.
- Switching off portable heaters when the area is unoccupied.
- Not using the heaters for any form of drying.
- Ensuring no combustible materials are stored near the heaters.
- Not bringing into the premises their own portable heaters which the Person in Control will instruct are to be removed

Document history

Assessments

An equality, sustainability or health, safety and welfare impact assessment and/or a risk assessment was last completed on:

EIA	05/02/25	SDIA	H – 23/01/25	HSWIA	22/01/25	RA	
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Audit trail

Listed below is a brief audit trail, detailing amendments made to this policy/procedure.

Page/para nos.	Brief description of change	Date
	Removal of technical design requirements to the Station Design Brief. Targets for energy reduction amended and waste recycling target added. General update on terms such as LFB rather than LFEPA.	16/04/2009
Throughout	Reviewed as current, Hyperlink in Appendix updated and reference to the "finance, procurement and property committee" deleted as this committee has been disbanded. No other changes made.	13/07/2010
Throughout	Minor wording changes made throughout, no change to the overall content of the policy.	21/07/2010
Throughout	Minor updates and changes throughout	18/07/2013
Throughout	More detailed policy aims included and new Appendix 2. Reviewed as current.	15/08/2014
Appendix 1 & 2	Minor amendment to Appendix 1 and throughout Appendix 2.	19/08/2014
Page 10	Subjects list and Freedom of Information Act exemptions tables updated.	03/02/2015
Throughout	This policy has been reviewed as current with no changes made.	07/06/2021
Appendix 2, para 8.2	'the Authority' replaced with the London Fire Commissioner (LFC).	07/12/2021
Throughout	Full review undertaken – energy conservation policy (PN0549) combined with heating policy (PN 0746), and carbon net zero considered. PN0746 has been cancelled.	12/02/2025

Subject list

You can find this policy under the following subjects.

Energy conservation	Environment
Sustainability	Carbon Net Zero

Freedom of Information Act exemptions

This policy/procedure has been securely marked due to:

Considered by: (responsible work team)	FOIA exemption	Security marking classification