

LFC – HVO Strategic fuel purchasing

Report to:

Investment & Finance Board
Commissioner's Board
Deputy Mayor's Fire Board
London Fire Commissioner

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For decision

For publication

Values met

Service
Integrity
Learning

PART ONE

Non-confidential facts and advice to the decision-maker

Executive Summary

As an interim decarbonisation measure agreed in 2024, London Fire Brigade (LFB) introduced the use of Hydrogenated Vegetable Oil (HVO) as an alternative to mineral diesel.

HVO has been supplied successfully for an 18-month period. During 2025 alone this resulted in an estimated 600-tonne reduction in CO₂ emissions. HVO is a drop-in fuel requiring no vehicle modifications and has been deployed across LFB's existing diesel fleet without operational issues.

This paper seeks approval to continue the procurement and supply of HVO fuel to all 37 strategic bulk fuel tanks across the LFB estate. Approval would enable the continued use of HVO by fleet vehicles operating from locations with strategic fuel storage, pending the transition to fully electric fire appliances.

HVO delivers a minimum 90% reduction in lifecycle CO₂ emissions compared to conventional mineral diesel. It is manufactured from renewable feedstocks sourced predominantly from Europe and the Americas.

For the London Fire Commissioner

The London Fire Commissioner agrees that a contract for the purposes of the procurement and usage of HVO at 37 strategic bulk fuel locations for three years be entered into in accordance with the arrangements set out below.

1. Introduction and background

- 1.1 Hydrogenated Vegetable Oil (HVO) is a paraffinic, synthetic diesel fuel that acts as a direct replacement for conventional mineral diesel. Unlike first-generation biodiesel, hydrogen rather than methanol is used as the catalyst in the production process, resulting in significantly cleaner combustion characteristics.
- 1.2 The chemical structure of HVO is almost identical to mineral diesel, enabling it to be used as a *drop-in alternative* with no modifications required to existing vehicles or fuel infrastructure. HVO is covered by European Standard EN 15940 and is widely supported by commercial vehicle manufacturers under standard servicing and warranty arrangements.
- 1.3 Due to the expected CO₂ benefits of using HVO to reduce carbon emissions, this procurement is currently scheduled to operate until fully electric fire appliances are delivered into LFB operations.

- 1.4 The procurement process will tender for the best prices and service delivery to ensure the supply of HVO is manageable, on time and available to all 37 bulk strategic fuel tanks.
- 1.5 Historically, HVO has been approximately 30% more expensive than mineral diesel. At the time of writing, due to geopolitical instability HVO pricing is currently broadly comparable with mineral diesel and is not expected to result in additional cost. This link outlines the costs for HVO over the past few years against road diesel costs. This is produced by the RAC: [Price of bio fuels v fossil fuels](#).
- 1.6 HVO fuel is additionally used to refill the stand-by generators at all fire stations as this contributes to LFB carbon emissions reduction targets. The Facility Management provider uses fuel from the strategic bulk fuel tanks for the generators as HVO does not become stale as no mineral decomposition takes place.
- 1.7 When used in road transport HVO, like all chemical fuels, continue to be more costly than electric vehicles on price per mile comparison. Recent studies have identified that the cost of using HVO is 79% more expensive than the same journeys using an electric vehicle. The taxes applied to Western Europe liquid fossil fuels continue to make HVO an attractive fuel to Internal Combustion Engine manufacturers.

2 Objectives and expected outcomes

- 2.1 This procurement supports the Mayoral objectives for functional bodies to reduce carbon emissions and create cleaner air quality for London.
- 2.2 The objectives set out for the project in the business case are as follows:
- **Fleet objectives:** fully support the delivery of LFB services, be environmentally sustainable, used efficiently, shared with community and partners whilst retaining a strong LFB identity and inclusive to all users.
 - **Delivery objectives:** being deliverable by end 2026, being affordable for LFB, providing acceptable value for money overall.
- 2.3 Approval is sought to commit expenditure and resources to continue to procure HVO as an alternative to diesel fuel. Following the successful completion of the procurement LFB will continue to provide HVO fuel to all 37 strategic reserve tanks.
- 2.4 Key project risks include;
- Fuel price volatility: HVO has historically been more expensive than diesel however global instability affects fuel prices rapidly during periods of disruption and reduces slowly during stabilisation making this a competitive fuel source at present. The bulk purchase of fuel is cheaper than using the forecourts on a like for like basis, noting that biofuel is not available on the majority of UK forecourts and is only available wholesale.
- <https://www.racfoundation.org/data/price-of-bio-diesel-v-fossil-fuel>
- <https://www.racfoundation.org/data/wholesale-fuel-prices-v-pump-prices-data>
- 2.5 A breakdown of the estimated cost for this proposal is provided in Part 2 of this governance paper.

- 2.6 The bulk strategic fuel supply is currently offered to emergency services within London and the Home counties during times of fuel shortage in the UK. This decision to provide emergency services fuel is currently managed by the Home Office in collaboration with London Fire Brigade (LFB), Metropolitan Police Service (MPS) and London Ambulance Service (LAS).

3 Values Comments

- 3.1 The LFC notes the Fire Standards Board requirements around adopting and embedding the Core Code of Ethics at an individual and corporate level. Following extensive engagement, the LFC has introduced Brigade values which build on and do not detract from the Code of Ethics.
- 3.2 Service – The procurement on the open market ensures the Brigade purchase HVO fuel at a cost-effective rate which provides good value and a quality product delivered on time.
- 3.3 Integrity – Procurement of this fuel source on the open market ensures all suppliers can bid to supply the brigade with strategic fuel reserves which provides an honest route to market to ensure exceptional value for money.
- 3.4 Learning – The Energy and Carbon Reduction team, conducted extensive research into biofuels and how they can be used by the Brigades appliances. This research included how the fuel is transported to the UK, and how and where it is grown. This was followed by direct contact with motor vehicle manufacturers to ensure they approved of using HVO and that it could be mixed with any ratio of mineral diesel fuel.

4 Equality Comments

- 4.1 The LFC and the Deputy Mayor for Planning, Regeneration and the Fire Service are required to have due regard to the Public Sector Equality Duty (section 149 of the Equality Act 2010) when taking decisions. This in broad terms involves understanding the potential impact of policy and decisions on different people, taking this into account and then evidencing how decisions were reached.
- 4.2 It is important to note that consideration of the Public Sector Equality Duty is not a one-off task. The duty must be fulfilled before taking a decision, at the time of taking a decision, and after the decision has been taken.
- 4.3 The protected characteristics are: age, disability, gender reassignment, pregnancy and maternity, marriage and civil partnership (but only in respect of the requirements to have due regard to the need to eliminate discrimination), race (ethnic or national origins, colour or nationality), religion or belief (including lack of belief), sex, and sexual orientation.
- 4.4 The Public Sector Equality Duty requires decision-takers in the exercise of all their functions, to have due regard to the need to:
- eliminate discrimination, harassment and victimisation and other prohibited conduct.
 - advance equality of opportunity between people who share a relevant protected characteristic and persons who do not share it.
 - foster good relations between people who share a relevant protected characteristic and persons who do not share it.
- 4.5 Having due regard to the need to advance equality of opportunity between persons who

share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- remove or minimise disadvantages suffered by persons who share a relevant protected characteristic where those disadvantages are connected to that characteristic.
- take steps to meet the needs of persons who share a relevant protected characteristic that are different from the needs of persons who do not share it.
- encourage persons who share a relevant protected characteristic to participate in public life or in any other activity in which participation by such persons is disproportionately low.

4.6 Where required the steps involved in meeting the needs of disabled persons that are different from the needs of persons who are not disabled include steps to take account of disabled persons' disabilities.

4.7 Having due regard to the need to foster good relations between persons who share a relevant protected characteristic and persons who do not share it involves having due regard, in particular, to the need to:

- tackle prejudice
- promote understanding.

5 Other considerations

Workforce comments

5.1 The use of HVO is identified as reducing emissions and particulates in vehicle exhaust. This may provide a positive effect on vehicle operators when near a pumping appliance during an incident or at station.

Sustainability comments

5.2 This report discusses the implementation of a fully functioning bulk fuel monitoring system. This supports the ongoing carbon reporting data required by the Sustainable Development Team.

5.3 This report does not introduce any significant sustainability impacts. Where new policies and/or corporate projects arise, they are subject to the Brigade's sustainable development impact assessment process.

Procurement comments

5.4 The sourcing of the HVO will be in compliance with the Procurement legislation and the LFC Scheme of Governance.

5.5 The route to market will be the Government Commercial Agency (GCA), previously known as the Crown Commercial Service, framework National Fuels 3 – Lot 1I, which is a compliant framework.

5.6 A mini competition will be carried out using this framework lot to leverage the LFCs requirements with other public sector organisations.

Communications comments

- 5.7 Communications were provided for the initial supply of HVO during 2024 and this should be followed up to explain the procurement contract has been extended for up to a further 5 years. This means that fire station crews should continue to order HVO fuel using the SAP system.

6 Financial comments

- 6.1 This report requests the authority to commit revenue expenditure of the procurement of a 3-year contract with a 2-year extension for the supply of HVO as fuel for fire appliances. We currently procure this fuel on the open market, and this paper is seeking authority to formalise this through a contractual arrangement to mitigate the price volatility in HVO fuel.
- 6.2 The budget for this project is funded from the Fire Stations fuel budget. This arrangement would not represent an incremental pressure on the fuel budget as HVO is used in place of mineral diesel for fire appliances.
- 6.3 In 2026/27, there is not expected to create a budget pressure arising from the purchase of HVO as the per litre price of HVO is trading below that of mineral diesel due to the ongoing US-Iran conflict and the continuing blockade of the Strait of Hormuz. However, in future years, as the price of diesel starts to reduce back to pre-war level, it is expected to create a budget pressure although this cannot be accurately quantified at present. The actual costs of HVO are very difficult to estimate as the cost of HVO is part of the global oils marketplace and subject to price fluctuations.
- 6.4 Please note that this paper is linked to the *Procurement for the Supply of Fuel Cards for the use of Fire Appliances at Public Forecourts* paper which is also requesting governance approval. Both papers impact the Fire Stations Fuel budget and will be carefully monitored during the 2026/27 financial year along with any required draw on the General Reserve.
- 6.5 With regard to non-pay inflation: all LFC contractual inflationary increases are reviewed on an annual basis. The LFC budgets for non-pay inflation on an item-by-item basis, and the LFC will review those assumptions as part of its budget process for 2027/28. If inflation rates are above current assumptions a resulting budget increase will need to be submitted as part of LFC's annual submission to the Mayor's GLA Group budget process and/or the contract will need to be reviewed to assess whether it is possible to reduce the annual cost via a reduction in service. If inflationary increases result in in-year financial pressures, this will be reported on as part of regular financial reporting and compensating savings identified or spend reductions agreed if required.
- 6.6 LFC standard terms and conditions include clauses on indexation and termination that can be utilised if inflationary pressures affect the performance of the contract. If a contract is no longer viable then LFC will seek to terminate it on this basis, or work with suppliers to pause delivery and/or renegotiate what is being delivered. This is preferable to inserting a break clause for inflation as such pressures apply across the market so it is unlikely that benefits will be gained from terminating a contract to go back out for competition.

7 Legal Comments

- 7.1 Under section 9 of the Policing and Crime Act 2017, the London Fire Commissioner (the "LFC")

is established as a corporation sole with the Mayor appointing the occupant of that office. Under section 327D of the GLA Act 1999, as amended by the Policing and Crime Act 2017, the mayor may issue to the LFC specific or general directions as to the manner in which the holder of that office is to exercise his or her functions.

- 7.2 By direction dated 1 April 2018, the Mayor set out those matters, for which the LFC would require the prior approval of either the Mayor or the Deputy Mayor.
- 7.3 Paragraph (b) of Part 2 of the said direction requires the LFC to seek the prior approval of the Deputy Mayor before "[a] commitment to expenditure (capital or revenue) of £150,000 or above as identified in accordance with normal accounting practices...".
- 7.4 The Deputy Mayor's approval is accordingly required for the LFC to purchase HVO fuel which has an estimated cost exceeding £150,000 and is set out in full in Part 2 of the report.
- 7.5 The arrangements proposed is consistent with the LFC's duty under section 7 (2)(a) of the Fire and Rescue Services Act 2004 ("2004 Act") to secure the provision of personnel, services, and equipment necessary to efficiently meet all normal requirements for firefighting and under section 5A of the 2004 Act to do anything it considers appropriate for the purposes of the carrying out of any of its functions.
- 7.6 The report sets out details for the proposed procurement, and procurement via the GCA framework is compliant with the Public Contracts Regulations 2015 and the LFC's standing orders on procurement. The GCA have conducted a compliant procurement in accordance with regulation 33 of the Public Contracts Regulations 2015 to set up GCA framework National Fuels 3 , GCA have aggregated public sector requirements and undertaken a further competition, from which the LFC is able to make a compliant call off award of contract.

List of appendices

Appendix	Title	Open or confidential*
1	EIA	Open
2	SDIA	Open

Part two confidentiality

Only the facts or advice considered to be exempt from disclosure under the FOI Act should be in the separate Part Two form, together with the legal rationale for non-publication.

Is there a Part Two form: Yes