

GREATER LONDON AUTHORITY

REQUEST FOR MAYORAL DECISION – MD2080

Title: Energy Leap Project

Executive Summary:

The Mayor of London has set out the ambition of London becoming a zero carbon city by 2050. Achieving this will require economy-wide decarbonisation. London's existing buildings are responsible for nearly 80 per cent of London's CO₂ emissions, and with 80 per cent of them likely to still be standing in 2050, a step-change in the pace and depth of our retrofitting needs to start now.

The Mayoral consultation, A City for all Londoners, therefore sets out the intention to develop new and innovative approaches to energy efficiency, starting with an early trial of net-zero-energy retrofitting of homes. This paper seeks approval for the funding and implementation of the "Energy Leap" Project in order to deliver the Mayor's commitment, as part of the Mayor's Energy for Londoners programme.

Capital funding of £450,000 will be used to match-fund a small scale trial (of at least ten homes) to deliver the first net zero energy retrofits in London, working in partnership with social housing providers and boroughs.

This MD also requests approval to receive and spend grant funding of \$169,200 (USD) from the Carbon Neutral Cities Alliance (CNCA) to support the delivery of the project, following successfully securing a second CNCA Innovation Fund revenue grant.

Decision:

That the Mayor approves:

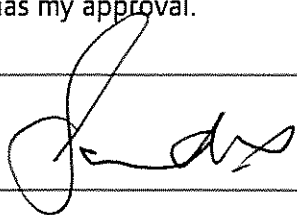
1. the delivery of a zero energy retrofitting trial in 2017 (the 'Energy Leap Project');
2. the allocation and expenditure of capital funding of up to £450,000 to match-fund the trial in partnership with social housing providers and boroughs; and
3. receipt and expenditure of \$169,200 (USD) grant funding from the Carbon Neutral Cities Alliance (CNCA) to support the delivery of the project.

Mayor of London

I confirm that I do not have any disclosable pecuniary interests in the proposed decision, and take the decision in compliance with the Code of Conduct for elected Members of the Authority.

The above request has my approval.

Signature:



Date:

15/2/12

PART I - NON-CONFIDENTIAL FACTS AND ADVICE TO THE MAYOR

Decision required – supporting report

1. Introduction and background

- 1.1 We currently use more energy to heat and power our buildings in London than for anything else – buildings are responsible for nearly 80 per cent of London’s total emissions and the lion’s share of final energy use. Our domestic buildings are responsible for around 36 per cent of London’s total emissions.
- 1.2 London’s homes have been built and developed over hundreds of years, and their energy efficiency varies significantly. London needs to overcome multiple challenges in relation to domestic energy efficiency including age, type and tenure of homes, and the lack of investment and stable government policy framework. Testing out new ways of retrofitting is therefore vital.
- 1.3 The Mayor is delivering successful domestic energy efficiency programmes across the capital, including RE:NEW and the recently launched Better Boilers scheme. However, a quarter of London’s homes that have been given an Energy Performance Certificate since 2009, have the worst energy ratings of E, F or G and are therefore wasting a large proportion of their energy¹.
- 1.4 We therefore need to bring forward the next generation of retrofitting, test new methods of construction and technology that will demonstrate leadership to the rest of world, so they can follow suit. If we get it right, energy efficiency will be at the heart of London’s economy. By reducing energy use and cutting down on waste in London’s homes, we can reduce energy bills, protect the most vulnerable and improve occupant health, make our energy system more sustainable, regenerate communities, create jobs and drive down greenhouse gas emissions.
- 1.5 The Mayor’s consultation, *A City for all Londoners*, therefore sets out a plan to “develop new and innovative approaches to energy efficiency, starting with an early trial of net-zero-energy retrofitting of homes”.
- 1.6 This commitment will be delivered through the Energy Leap Project, and is expected to make London the first capital city in the world to replicate the innovative Dutch *Energiesprong* retrofitting approach. *Energiesprong* is a transformational approach to delivering ‘whole house’ retrofits without subsidy. It uses state-of-the-art methods of construction to bring homes to net zero energy levels within a week, and is funded by guaranteed energy savings over 30 years (the retrofit contractors providing energy savings guarantees). The approach also improves the look and feel of the home and brings greater awareness to home energy use. To date, nearly two thousand *Energiesprong* retrofits have been delivered in the Netherlands, mostly within the social housing sector, as part of an 111,000-home volume deal between housing associations and builders.
- 1.7 There is significant momentum across Europe and internationally for this initiative. In July 2015, leading social housing providers, construction companies, trade bodies and expert organisations came together to form *Energiesprong UK*, a profit-for-purpose organisation with the intention of creating a ‘game-changing’ refurbishment sector (and the UK branch of the European programme team). In June 2016, and with help from the GLA, the European *Energiesprong* team secured €5.4m of EU funding through the Interreg NWE programme to help scale *Energiesprong* retrofitting in the UK, France and the Netherlands, and to stimulate mass uptake of zero energy refurbishments. International cities such as New York are also seeking to implement the model.
- 1.8 The GLA has undertaken considerable work, exploring the approach over the past two years, successfully demonstrating national and international leadership, including holding the first *Energiesprong* summit in the UK. Last year the GLA completed a Carbon Neutral Cities Alliance (CNCA) grant-funded independent transferability assessment undertaken by Frontier Economics, Savills and University College London. In addition, the GLA has been actively participating in *Energiesprong UK*, engaging with social housing providers and boroughs (including through

¹ Association for the Conservation of Energy – *Energy Efficiency in London*, 2016
<http://www.ukace.org/wp-content/uploads/2016/07/Energy-Efficiency-in-London.pdf>

roundtables and analytical support provided through the RE:NEW programme), and sharing learnings and plans with C40 and the CNCA.

- 1.9 With several social housing providers and boroughs keen to provide properties and potential part-funding for a London trial, an offer of monitoring and evaluation support from Imperial College London, and a CNCA revenue grant to the GLA of \$169,200, the provision of GLA capital match funding is being sought.
- 1.10 If proven to work within a London context and deployed at scale, the model could help transform our approach to retrofitting homes and regeneration, and help significantly reduce fuel poverty in the capital.

Rationale for a retrofitting trial in London

- 1.11 There is a strong case for delivering a small scale zero energy retrofitting trial in London:
- **we need a step-change in the pace and scale of retrofitting.** The Dutch Energiesprong approach – which this project will seek to replicate – is focussed on creating fully integrated market-driven volume-deals
 - **GLA’s 2016 London Energiesprong Transferability Assessment highlighted a number of key barriers and challenges that need to be overcome,** to enable zero energy retrofitting to be rolled out at scale through Energy Leap
 - **the Energy Saving Trust estimates that in post-1950s two and three bedroom social housing in London there is the potential for up to 270,000 zero energy retrofits** to be delivered (equal to a third of London’s total social housing stock)
 - **a trial will act as a first step to a large scale demonstrator,** to deliver several hundred or thousand retrofits and overcome other key challenges including more complex building typologies and pepper-potting of leaseholders.

Proposed next steps

- 1.12 We have already undertaken considerable engagement with social housing providers and boroughs and there is enthusiasm for demonstrating Energy Leap in the capital. We now plan to hold further roundtables with social housing providers to discuss the project scope and timetable at the end of February and cement interest in partnering on the trial project. In parallel, we will continue to engage with boroughs. This engagement will help us get a better sense of the potential partners for the trial. We then plan to conduct a competitive application process to identify recipients of the GLA funding (applicants being required to provide match funding), which will be evaluated using objective criteria. The highest scoring applicants will be required to enter into and execute a funding agreement on the GLA’s standard funding terms before any commitment is made to provide GLA funding.
- 1.13 The final ten trial homes will be selected by the social housing provider or borough, in partnership with the GLA. Trial properties are likely to include terraced houses or purpose-built low-rise blocks of flats, with high levels of disrepair, and where fuel poverty is particularly acute.
- 1.14 Following the selection of the ten trial homes, an outcome-based invitation to tender, will be issued by the recipients of GLA funding for the retrofitting works, with the zero energy refurbishments completed by mid-December. The specification is likely to require that each retrofit involves
- a zero energy performance level, backed by an energy performance warranty
 - quick delivery (the installation of the package should not require more than two weeks and allow occupants to continue living in the house for the greater part of the works)
 - a home energy performance contract (tenant ‘energy plan’), replacing an energy bill
 - a refurbishment package that is attractive to and accepted by the occupant(s). Social housing providers have been undertaking considerable engagement with tenants already, including through focus groups and surveys (which have shown significant appetite), to test the acceptability of the Energy Leap proposition to residents.

- 1.15 Concurrently, the GLA officers will be exploring with housing specialists how this solution can be applied to new build. A retrofit pilot makes a statement that if we can deliver zero energy refurbishments successfully; there is a much stronger argument for new build.

2 Objectives and expected outcomes

- 2.1 The key purpose of the Energy Leap Project will be to deliver the first ten zero energy retrofits in London. Each retrofit will demonstrate cutting edge building techniques, renewable technologies, and smart controls. The project will also enable London to:
- a. **develop the first home energy performance contract for a zero energy refurbishment** in London
 - b. **design successful large scale demonstrator projects** involving thousands of retrofits
 - c. **provide a template for how London's energy efficiency market and supply chains should be (re)organised** to deliver whole house retrofit solutions
 - d. **evaluate the impact on social, environmental and economic factors** through evaluation of the refurbishments (e.g. technical and financial performance, and impact on the health and wellbeing of tenants)
 - e. **kick-start innovation** and encourage solution providers to prepare for the future
 - f. **provide rapid evidence to inform the way we approach new build.**

3 Equality comments

- 3.1 The GLA will take appropriate steps to ensure that there are no potential negative impacts expected on those with protected characteristics. Those with protected characteristics will gain from the positive benefits of this scheme in equal measure should their homes be selected for trial, and there will be equality of access to participate in the delivery and benefit from the project, without discrimination. A further review will be undertaken if there is a wider roll out of the scheme following the outcomes of the trial.
- 3.2 The trial will comprise homes with high levels of disrepair and potentially fuel poverty. It is therefore expected that this scheme will have a positive impact on lower income and fuel poor households directly through the home refurbishments and support they will receive, and by catalysing greater awareness of energy use and the opportunities to reduce their consumption.

4 Other considerations

- 4.1 The key risks and issues for delivery of this project are set out in the table below:

Risk	Likelihood (out of 5)	Impact (out of 5)	Rating	Mitigation
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Partners (i.e. social housing providers and boroughs) have insufficient interest or do not secure budget.	1	1	1	Continue to engage with housing providers and boroughs including through roundtables before the start of the financial year 2017-18. A number of partners are already engaged and in the process of identifying suitable properties and budgets. While multiple delivery partners would be preferable, a minimum of one delivery partner is needed.
Planning authorities are unwilling to grant permissions for proposed retrofitting solutions, or permissions are delayed.	1	2	2	Stock analysis to date has aimed to avoid potentially sensitive areas (e.g. conservation areas). Early engagement with planning authorities will be undertaken.
Budget overrun or ten retrofits becoming unaffordable due to costs of implementation being significantly higher than expected.	1	4	4	The construction industry has already indicated a readiness to provide retrofits at a competitive price. We therefore intend to continue to engage solution providers / supply chain(s) to ensure cost estimates are accurate, and identify key price sensitivities.

5 Project costs

- 5.1 The GLA has successfully secured a second CNCA revenue grant, of \$169,200, to cover trial's staffing, marketing and associated project costs. Furthermore, we have also agreed with Imperial College London for them to conduct the monitoring and evaluation of the project, free of charge. Therefore no additional revenue funding for this project is required.
- 5.2 Trialling the first ten zero energy refurbishments is expected to require capital expenditure of around £750-800k (c£75-80k per home retrofit, depending on specification). Several housing providers and boroughs are ready to commit homes to a trial and have informally offered part-funding (up to £35k per home retrofit) and key players within the construction industry have indicated a readiness to provide retrofits at a competitive price.
- 5.3 Capital funding of up to £450,000 in total is therefore sought to enable the GLA to provide funding as a contribution toward recipients' costs of projects comprised in the trial, including a small contingency.

6 Governance and oversight

- 6.1 The project will be overseen by the London Energy Efficiency Team within the Environment Unit, with a new Project Officer managing the day-to-day delivery. An Energy Leap Project Steering Group will be established to guide and inform the direction of the trial, sign off on (or escalate) key decisions, and play an active role in the dissemination of outputs and outcomes.

- 6.2 Advising and observing CNCA and C40 cities will be invited to join quarterly teleconference meetings to be informed of progress, manage project interdependencies, and help steer the project.

7 Financial comments

- 7.1 The paper is seeking approval for capital funding of £450k as match-funding, to fund a trial of zero energy refurbishments to ten homes, with average cost per home retrofit being £75k-£80k. The budget for this project will form part of the 2017/18 GLA budget which will be agreed in March 2017. The remaining match-funding (up to £350k), will be met by housing providers and boroughs. The project has also secured \$169.2k USD, (circa. £135.7k; FX \$1.246USD, 08/02/17, UKForex), to cover Revenue expenditure associated with the project.

8 Legal comments

- 8.1 The foregoing sections of this report indicate that:
- 8.2 the decisions requested of the Mayor concern the exercise of the GLA's general powers, falling within the GLA's statutory powers to do such things considered to further or which are facilitative of, conducive or incidental to the improvement of the environment in Greater London: and
- 8.3 in formulating the proposals in respect of which a decision is ought officers have complied with the GLA's related statutory duties to:
- (a) pay due regard to the principle that there should be equality of opportunity for all people;
 - (b) consider how the proposals will promote the improvement of health of persons, health inequalities between persons and to contribute towards the achievement of sustainable development in the United Kingdom; and
 - (c) consult with appropriate bodies.
- 8.4 In taking the decisions requested, the director must have due regard to the Public Sector Equality Duty; namely the need to eliminate discrimination, harassment, victimisation and any other conduct prohibited by the Equality Act 2010, and to advance equality of opportunity between persons who share a relevant protected characteristic (race, disability, gender, age, sexual orientation, religion or belief, pregnancy and maternity and gender reassignment) and persons who do not share it and foster good relations between persons who share a relevant protected characteristic and persons who do not share it (section 149 of the Equality Act 2010). To this end, the director should have particular regard to section 3 (above) of this report.
- 8.5 Officers have indicated in sections 1 and 2 (above) of this report that that the proposed contribution of up to £450,000 amounts to the provision of grant funding and not payment for services. Officers must ensure that:
- 8.6 the funding is distributed fairly, transparently, in accordance with the GLA's equalities and in manner which affords value for money in accordance with the Contracts and Funding Code; and
- 8.7 appropriate funding documentation is put in place between the GLA and recipients of such funding before any commitment to fund is made.
- 8.8 Officers must also ensure that:
- 8.9 they are content that the GLA is able to comply with any conditions of the CNCA funding and a legally binding commitment to CNCA's provision of such funding is in place before the GLA places any reliance upon the same;
- 8.10 any services necessary for the delivery of the trial are procured by Transport for London who will determine the detail of the procurement strategy to be adopted in accordance with the GLA's Contracts and Funding Code; and
- 8.11 that appropriate contract documentation is put in place and signed by the GLA and any such suppliers before the commencement of the provision of such services required.

9 Planned delivery approach and next steps

Activity	Timeline
Recruit and set up project team	February-March 2017
Roundtable with social housing providers	end-February 2017
Delivery partner selection – ITT launched	end-March 2017
Delivery partners appointed – trial property shortlist finalised	end-April 2017
Tenant consultation complete and trial property list finalised	end-May 2017
Contractor(s) appointed for retrofits	mid-August 2017
Designs and permissions finalised and installation commences	November 2017
Retrofitting complete	mid-December 2017
Project monitoring and evaluation	January – March 2018

Appendices and supporting papers: None

Public access to information

Information in this form (Part 1) is subject to the Freedom of Information Act 2000 (FOI Act) and will be made available on the GLA website within one working day of approval.

If immediate publication risks compromising the implementation of the decision (for example, to complete a procurement process), it can be deferred until a specific date. Deferral periods should be kept to the shortest length strictly necessary. **Note:** This form (Part 1) will either be published within one working day after approval or on the defer date.

Part 1 Deferral:

Is the publication of Part 1 of this approval to be deferred? No

If YES, for what reason:

Part 2 Confidentiality: Only the facts or advice considered to be exempt from disclosure under the FOI Act should be in the separate Part 2 form, together with the legal rationale for non-publication.

Is there a part 2 form – NO

ORIGINATING OFFICER DECLARATION:

Drafting officer to confirm the following (✓)

Drafting officer:

James Hardy has drafted this report in accordance with GLA procedures and confirms the following have been consulted on the final decision.

✓

Assistant Director/Head of Service:

Patrick Feehily has reviewed the documentation and is satisfied for it to be referred to the Sponsoring Director for approval.

✓

Sponsoring Director:

Fiona Fletcher-Smith has reviewed the request and is satisfied it is correct and consistent with the Mayor's plans and priorities.

✓

Mayoral Adviser:

Shirley Rodrigues has been consulted about the proposal and agrees the recommendations.

✓

Advice:

The Finance and Legal teams have commented on this proposal.

✓

Corporate Investment Board

This decision was agreed by the Corporate Investment Board on the 13 February 2016.

EXECUTIVE DIRECTOR, RESOURCES:

I confirm that financial and legal implications have been appropriately considered in the preparation of this report.

Signature

M. J. O'Leary

Date

13.2.17

CHIEF OF STAFF:

I am satisfied that this is an appropriate request to be submitted to the Mayor

Signature

D. Bellamy

Date

14/2/2017.