

GREATER LONDON AUTHORITY

REQUEST FOR ASSISTANT DIRECTOR DECISION – ADD2245

Title: Home Response

Executive Summary:

The Greater London Authority, in partnership with Moixa, Repowering London and UK Power Networks, has been successful in their grant funding proposal to the UK Government Department for Business, Energy and Industrial Strategy (BEIS) Domestic Demand Side Response Competition (phase one of a two phase competition).

The Home Response project will look at how smart energy technology, data and energy services can be used in Londoners' homes to cut energy bills and reduce energy use. It will also aim to reward energy flexibility and contribute to a smarter, cleaner energy system for London.

The first phase of the project, which is the subject of this ADD, is a feasibility study that will identify flexible ways to use energy in Londoners' homes. The study will also produce a funding proposal (project plan) for a phase two demonstration project to test the phase 1 recommendations regarding energy use flexibility. The phase two projects will be selected and funded by Government based on the quality of feasibility studies submitted for phase one, and there will be a further decision form to approve receipt of funding.

This project contributes to delivering the Mayor's aim for London to be a zero-carbon city; the London Environment Strategy objective to develop clean and smart, integrated energy systems utilising local and renewable energy resources; and, proposals to investigate the potential for demonstrators where Londoners can help manage London's energy demand and undertake demonstration projects to improve London's energy systems.

Decision:

That the Assistant Director of Environment approves:

1. Receipt of a grant income of £22,701 and entry into an associated grant agreement with the Department for Business, Energy & Industrial Strategy;
2. Disbursement of the grant funding to project partners: Moxia (£4,402) Repowering London (£9,705); UK Power Networks (£2,244) and entry into an associated consortium agreement; and
3. Expenditure of £6,350 (funded from the grant income) to be utilised on project management, travel and expenses and sub-contracting services for data analysis.

AUTHORISING ASSISTANT DIRECTOR/HEAD OF UNIT:

I have reviewed the request and am satisfied it is correct and consistent with the Mayor's plans and priorities.

It has my approval.

Name: Patrick Feehily

Position: Assistant Director of Environment

Signature:



Date:

02/07/2018

PART I - NON-CONFIDENTIAL FACTS AND ADVICE

Decision required – supporting report

1. Introduction and background

- 1.1 The Mayor wants London to be zero carbon city by 2050. To help achieve this aim the London Environment Strategy has set the policy objective to develop clean and smart, integrated energy systems utilising local and renewable energy resources. This objective will, in part, be delivered by demonstration proposals which improve London's energy systems and investigate the potential for Londoners to help manage London's energy demand.
- 1.2 The Greater London Authority (GLA), and project partners, has been awarded a BEIS Domestic Demand Side Response (DSR) Competition grant (£22,701.10 total; £6,350 GLA) to complete a feasibility study (phase 1) by 27 July 2018. This will identify the potential for DSR (incentivising and enabling consumers to lower or shift their electricity use at peak times by using smart energy technologies, payments and tariffs) in domestic properties and set out a detailed project plan for testing the proposed demand flexibility in a Phase 2 demonstration project. The feasibility study and project plan will be subject to Deputy Mayor (Environment & Energy) approval prior to submission to BEIS. The phase 2 demonstration projects will be selected by BEIS for funding (up to £1 million grant for each demonstration project) based on the feasibility studies submitted for phase 1. If successful, the phase 2 acceptance of grant income, entering into a grant agreement with BEIS and a consortium agreement with project partners, will be subject to Deputy Mayor and Mayoral approval.
- 1.3 The aim of this Government Competition is to identify and demonstrate controllable, flexible demand in real domestic environments which can be replicated at significant scale in identical or similar applications. The Competition is interested in projects which allow control of existing domestic energy loads (for example electrical heating, appliances and lights) and in projects which explore control of domestic loads which could offer substantial load flexibility in the future (for example domestic storage batteries, heat pumps and electric vehicles). Projects that demonstrate novel business models that engage consumers are also encouraged.
- 1.4 The focus is on identifying and testing novel usage of flexible demand that incentivise consumers to lower or shift their electricity use at peak times. The project will be largely using the application and integration of existing DSR and other IT or communication technologies – rather than on the development of new DSR consumer products – such as 'smart appliances'.
- 1.5 Home Response is a Mayor of London project in partnership with Moixa, Repowering London and UK Power Networks. During the phase 1 feasibility study, the project partners will:
- identify a specific set of London properties (social housing managed by London Boroughs and Housing Associations) that are suitable for trials of new DSR and novel business models that engage Londoners;
 - set out a detailed project plan for testing the proposed demand flexibility in a Phase 2 DSR Demonstration;
 - secure the commitment of social housing owners (Boroughs, Housing Associations and private tenants) to participate in the Phase 2 Demonstration; and
 - describe in detail (as part of the project plan) how they will demonstrate and disseminate the proposed DSR solution to other similar settings with similar opportunities.
- 1.6 The feasibility study will include: Bidder Organisation Information; Public Description of the Project; Executive Summary; Aims and Objectives; Technical Solution and Expected Performance; Innovation and Technology Readiness; Market Potential and Exploitation Plans; Dissemination

1.7 During the phase 2 demonstration, the project partners will:

- make use of a range of existing energy technologies and services that are deployed in households, such as local electricity generation using photovoltaics, battery storage and electrical heating technologies for space heating and hot water;
- use them in new ways to unlock their DSR potential;
- develop and trial a domestic DSR solution delivered at community level;
- allow London's electricity grid operator (UK Power Networks) to better manage the electricity network at times of critical need (i.e. peak times of energy use);
- deliver a solution that can adapt and fit to National Grid's needs for national electricity network management and flexibility; and
- produce detailed dissemination material and to include operational information about the DSR solution used.

1.8 The GLA will be the project management lead and also lead on the relationship with BEIS. The GLA's funding of £6,350 to be utilised on project management, travel and expenses and sub-contracting services for data analysis. Moxia will lead the use of smart energy technologies and data; Repowering will lead engagement and co-design of energy services with Londoners living in selected properties and co-design; and UK Power Networks will lead design of the end-to-end DSR solution that meets their network management requirements.

1.9 The GLA is the accountable body to BEIS, but all obligations in the grant documents have been fully incorporated in the consortium agreement and stated that they apply to the project Parties. All obligations will be managed through the project governance arrangements stated in the consortium agreement.

2. Objectives and expected outcomes

3.1 The project partners will, by completing the phase 1 feasibility study identify the potential for DSR in a specific domestic household setting (social housing) and set out a detailed project plan for testing the proposed demand flexibility in a phase 2 DSR demonstration. Subject to securing further funding from BEIS, the project partners will, by delivering the phase 2 demonstration, aim to demonstrate flexible use of energy in Londoners' homes by using demand side response and distributed energy resources (local electricity generation using photovoltaics and battery storage).

3.2 The project will, by delivering the phase 2 demonstration: help contribute to delivering a zero carbon London by 2050 with smart flexible energy systems; cut consumer electricity bills and reduce their energy use; financially reward consumers who use energy in more flexible ways; and, allow electricity grid operator (UK Power Networks) to better manage their network by providing flexible ways to manage demand at times of critical need (i.e. peak times of energy use).

3.3 BEIS' specific objectives for the competition are:

- Secure earlier and greater levels of deployment of DSR applications in domestic environments by delivering such DSR applications, each of which is ready to be rolled out to multiple other similar settings within 2 years of completion of the funded project. In turn, deployment of DSR is expected to enable the realisation of a range of energy system benefits.

- Provide more detailed, robust data about the likely extent of and potential for DSR deployment in domestic environments in the UK and the savings which could be secured from domestic DSR in the UK.
- Create greater awareness of the potential benefits and scope for deploying DSR among domestic users.
- Create greater awareness of the potential benefits to be secured from Smart Meters among domestic users.
- Implement potentially attractive business models for capacity-based energy market services from the perspective of residential end-users who can adjust their energy consumption.
- Strengthen UK supply chains for DSR applications and deployment.
- Encourage collaboration and partnership between DSR users, technology developers and academic or other supply chain partners; help to involve supply chain partners in finding innovative solutions

3. Equality comments

- 3.1 The GLA will ensure that (as part of its on-going legal responsibility to have due regard to the need to promote equality, in everything it does, including its decision-making). barriers are removed that may prevent those with protected characteristics benefiting from the project. The project will require the partners to identify those protected groups who could benefit, determine whether barriers exist and measures to remove those barriers. The partners will estimate the numbers involved for each relevant characteristic. Phase 2 will evaluate the outcomes.
- 3.2 GLA Environment Unit commissioned an Integrated Impact Assessment (IIA) on the draft London Environment Strategy. This evaluated the social, economic, environmental, health, community safety and equality consequences of the strategy's proposed policies in order to ensure they are fully considered and addressed. A post-adoption statement showing how the IIA influenced the final strategy has been published.

4. Other considerations

- 4.1 The project, if to be awarded phase 2 demonstration funding, must secure the involvement of social housing providers and their domestic customers. The project partners have already secured the commitment of two London Boroughs (Waltham Forest and Camden) and one housing association (Hyde Housing) to participate in the project. A strategy for securing additional commitments is needed if the partners are to maximise the likelihood of securing phase 2 funding.
- 4.2 The phase one feasibility will include an assessment of the potential benefits and impacts of the project approach if scaled across London.

5. Financial comments

- 5.1 Assistant Director's approval is sought for the acceptance, and distribution to project partners, of the conditional grant offer of £22,701. The grant will be from the UK Government Department for Business, Energy and Industrial Strategy to fund the phase one feasibility study for Home Response project.
- 5.2 The income will be claimed by the GLA from BEIS on delivery of agreed work and the GLA will then grant the partners; Moixa, Repowering London and UKPN. At this stage, a total of £16,351 is to be redistributed to the 3 partners, leaving the GLA with £6,350 to be utilised on project management, travel and expenses and sub-contracting services for data analysis.

6. Planned delivery approach and next steps

Activity	Timeline
Building stock analysis	6 July 2018
Functional architecture: Logical and functional end to end DSR system	6 July 2018
Determine emerging DSR opportunities for phase 2 testing	6 July 2018
Engagement survey of community interests in DSR	9 July 2018
Engage phase 2 clients: housing associations, boroughs	9 July 2018
Submission of Phase 1 feasibility study and Phase 2 project plan proposal	27 July 2018
Project Closure	3 August 2018

Appendices and supporting papers:

Appendix 1 – Grant Offer Letter

Appendix 2 – Grant Agreement

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:

Until what date: (a date is required if deferring)

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:**

Daniel Barrett has drafted this report in accordance with GLA procedures and confirms that the Finance and –if relevant– Legal teams have commented on this proposal as required, and this decision reflects their comments.

Corporate Investment Board:

The Corporate Investment Board reviewed this proposal on 2 July 2018.

HEAD OF FINANCE AND GOVERNANCE:

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

Signature:



Date:

03-07-18