

Committee(s)	Dated:
Corporate Asset Sub Committee Policy and Resources Committee	18 July 2017 21 Sep 2017
Subject: Energy Efficiency Loan Scheme update	Public
Report of: City Surveyor	For Decision
Report author: Mansi Sehgal, Corporate Energy Manager	

SUMMARY

The Energy Efficiency Fund (EEF) as recommended in the AECOM report was launched on 6 July 2016 for service departments to apply for a loan to implement energy saving projects. The scheme has approval to operate until the end of 2018-19.

Out of the six bids submitted in July 2016, three were approved by the Energy Board. These are:-

- a. Guildhall System Condenser Pump Controls, City Surveyors department
- b. Freeman's School Solar Photo Voltaic panels (PV), City of London Freeman's School
- c. Warren Offices Solar PV, Open Spaces department

For 17-18 there are two projects in the pipeline and will be considered for the loan:

- Swimming pool covers at City of London Freeman's School (timeline to be confirmed by the School).
- LED lighting upgrade at Guildhall Complex West Wing (application to be submitted in July 2017).

Feedback from some departmental energy representatives indicates that one of the barriers to bidding for project loans is the lack of funding for feasibility studies for new energy saving initiatives. These are currently not funded by the loan scheme as payback cannot be guaranteed. Hence there is a proposal to allocate 15% of the loan (£75,000) as a grant to unlock potential future energy projects.

RECOMMENDATION (S)

Members are asked to:

- Note the three projects approved by the Energy Board in Dec 2016.
- Approve the use of up to 15% (£75,000) of the annual £0.5m loan allocation as a grant instead of a loan for feasibility studies which support energy project development to be approved by the Energy Board.
- Extend the Energy Efficiency Loan scheme to the end of 2020/21 to allow the scheme to run for a five year period with a further review report at the end of 2018-19.

MAIN REPORT

Background

1. The Energy Efficiency Fund (EEF) was launched on 6 July 2016 for departments to apply for the loan money to undertake energy efficiency projects. Various communication methods were used including an Insight Lunch, Intranet promotions and face to face meetings to promote the loan.
2. Six bids were received in this opening round (please see Appendix 1), all of which were assessed and scored against the following criteria:
 - a. Payback (35% weighting);
 - b. Alignment with corporate objectives, service improvements and links to other strategic projects (15% weighting);
 - c. Risks to delivery of the project and quality of evidence of risk management (15% weighting);
 - d. Robustness of proposed management and governance arrangements (10% weighting);
 - e. Plans for monitoring project success and achieving savings (10% weighting), and
 - f. Benefits Realisation, including CO2 savings, reputational impact and wider socio-economic factors (15% weighting).

Results

3. The review panel agreed to shortlist projects that scored more than 60% overall. The following bids were qualified as a result:
 - a. Guildhall CHW System Condenser Pump Controls, City Surveyors Department
 - b. Freeman's Solar PV, Freeman's School
 - c. Warren Offices Solar PV, Open Spaces Department
4. The current T&Cs of the Fund do not approve of projects over a payback of more than 10 years - one of the main reason where the Guildhall Solar PV bid fell short of in comparison to other two solar PV bids.
5. Harrow PVs and Hampstead Lido PVs scored less than 60%, however we have been informed that Open Spaces department is progressing with these two projects and funding them through local risk resources.

Progress since the approval

6. Guildhall System Condenser Pump Controls
Soon after the approval in Sep 2016 the project manager did an outline design and received a quote for the works. However, during the detailed design stage it was identified the condenser pump itself is likely to need replacement to accommodate the pending chiller plant replacement. Therefore the installation of the pump controls

has been put on-hold for now to coincide with the replacement of the chiller plant listed in the 20-year plan for 2018/19.

7. Warren Offices Solar PV

The planning application has been formally approved and a supplier has also been selected. Provisional start date for the project is 31st July 2017.

8. Freeman's Solar PV

The planning application has been formally approved and a supplier has also been selected. The School needs to confirm on the project start date.

2017-18 projects pipeline

9. Freeman's new swimming pool covers

Pool covers are a standard best practice measure for reducing energy consumption, and the Carbon Trust advise installation typically reduces heat losses by 10-30%. The Energy Team has obtained a quote from a supplier for £44,074 and the supplier estimates annual savings of £23,902 and a 1.8 year payback.

10. GHC West Wing LED lighting replacement

The existing florescent lighting is to be replaced with LED equivalents at the GHC West Wing which are about 70% more energy efficient. The LED lighting will result in improved lighting levels and significantly lower maintenance requirements. The Energy Team's early estimates are suggesting a payback of 7 years with a capital investment of for ~ £87,000.

11. Guildhall Solar PV installation

The Energy Team is also looking to discuss and re-evaluate the Guildhall Solar PV installation bid with the new BRM contractor.

Existing barriers and review of the scheme

12. The uptake for the loan scheme is still low and one of the main barriers is the very nature of the fund itself i.e. it is set up as a loan. The Energy Team witnessed a few cases during the last 12 months where service departments were able to fund individual projects through their local risk resources and were not keen on applying for a loan.

13. Furthermore the loan scheme does not fund feasibility studies as repayment cannot be guaranteed. The Corporation has already in the past implemented quick win projects and now is the time to explore complex energy efficiency projects such as assessing options to replace main GHC energy plant. Such a complex project would definitely require a feasibility study to appraise various

options. Another project at Guildhall's Art Gallery requires a feasibility study that was originally recommended by the AECOM study.

14. There was another case where it was revealed that the internal departmental policy do not encourage them borrowing from the centre.
15. It should also be noted that a number of energy saving projects have progressed utilising other sources of funding For example the Department of Built Environment have approval for capital funding to replace the Street lighting bulbs with LED lanterns . The Gateway 5 report is due to be submitted July 17 and it has been indicated the roll out will take approximately 18 months from the kick off.

Conclusion

16. In the original report (put forward to the Efficiency & Sub Committee in July 2014) it was suggested to review the scheme after two years of its establishment. However mainly due to changes in personnel the loan scheme was not operational until 2016/17 and due to the current low uptake the Energy Team proposes the following changes:

- To release up to 15% (£75,000) of the annual loan sum of £0.5m for grant funding technical feasibility studies on an annual basis to assist and accelerate the development of business cases for project applications to the loan scheme.
- To again review the scheme at the end of 2018/19 financial year to assess any positive impact of releasing a % of the loan money for feasibility studies.
- To revise the timeframe of the loan. At present it extends up to 2019/20. Given that the loan was official launched in 2016/17 and 2017/18 will be the first year when the loans to the approved bids will be paid out, the Energy team recommends to extend the life of the loan scheme to 2020/21.

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Appendix 1: Energy Efficiency Loan Bids

EEF Applications Tranche 1 (August 2016)									
Project	Department	Project	Funds requested	Simple Payback (years)*	NPV**	Savings (kWh/year)	Savings in year 1 (£/year)**	Savings	Score
1	City Surveyors	Guildhall CHW System Condenser Pump Controls	£33,551	1.7	£186,983	162,060	£18,935	14.7% reduction for West Wing Chillers electricity	77%
2	Freemen's School	Freemen's Solar PV	£62,930	8.6	£28,148	35,787	£6,732	25% reduction for Sports Hall electricity	63%
3	Open Spaces	Warren Offices Solar PV	£61,920	9.8	£15,884	30,259	£5,767	29% reduction for Warren offices electricity	63%
4	City Surveyors	Guildhall West Wing Solar PV	£58,594	11.5	£7,476	29,774	£4,968	1.3% reduction for West Wing electricity (excl. chillers)	55%
5	Open Spaces	Hampstead Lido Solar PV	£37,780	9.1	£9,954	22,200	£3,841	6% reduction for the Lido electricity	50%
6	Open Spaces	Harrow Road Solar PV	£21,520	9.9	£4,590	10,320	£1,967	31% reduction for the site electricity	50%
Total			£276,295		£253,035	290,401	£42,211		
<p>* Pay back year is the point at which the undiscounted cumulative net cash flow exceeds the funding requested.</p> <p>** NPV is calculated over life of asset; anticipated lives is 25 years for solar PV life and 15 years for pumps controls.</p> <p>*** These are the savings for the first 12 months following installation, savings for subsequent years may differ.</p>									

Appendix 2- Background information on the EEF Loan Scheme

1. In May 2013, the City commissioned AECOM to carry out a strategic energy review of the operational estate. The overall aim of the review was to prepare a roadmap for how the City can reduce its energy use by 40% by 2025 against a 2008/9 baseline. In December 2014, the Finance Committee agreed an energy reduction target of 9% for the period 2014/15 to 2017/18, which would maintain the City's progress towards the 40% reduction by 2025.
2. As a result of this study a set of recommendations were put forward and agreed by the Chief Officer Summit Group in January 2014. These were reported to the Efficiency and Performance Sub Committee in July 2014 and the Finance Committee in December 2014.
3. One of the recommendations was to set up an Energy Efficiency Fund (interest free loan) that would allow for easy access to finance, enabling strategic energy investments to take place in the City.
4. In September 2014, the Efficiency and Performance Sub Committee gave in-principle support to the establishment of a fund, but highlighted the need for a revised report, with a detailed business case to be presented to the Resource Allocation Sub Committee.
5. In December 2014, an outline proposal for the fund was reported to the Finance Committee, and in March 2015 the Resource Allocation Sub Committee approved the establishment of the internal Energy Efficiency Fund, with funding of £500k per annum for five years. This was endorsed by the Policy and Resources Committee.
6. Members authorised the City Surveyor, with the support of the Town Clerk and the Chamberlain, to establish appropriate administration arrangements for the Fund, which would be based on the operational and eligibility criteria outlined in the report to Members. Members also noted a proposal for an annual review of progress with the fund and projects funded, to be reported to the Efficiency and Performance Sub Committee.
7. Since approval was given to the establishment of the fund, both the Town Clerk's Head of Sustainability and the (then) Corporate Energy Manager had left the City Corporation. As a result, there were some delays in progressing with the establishment of the fund.
8. The new Corporate Energy Manager joined the City Corporation later in 2015, developing an Opportunity Outline to take forward the full set of recommendations from the AECOM review. This was endorsed by the Chief Officer Summit Group in September 2015, who also agreed the establishment of a Strategic Energy Programme Board to drive this project forward. The Board has been chaired by the Deputy Town Clerk, with membership including the Director of Open Spaces and staff from the Town Clerk's, Chamberlain's and City Surveyor's Departments.

9. The Board reviewed and revised the outline operational and eligibility criteria to develop a formal set of Terms and Conditions for the Fund. The key changes from the outline presented to Members are:

- To revise the payback period from 5 years (extendable upto 8 years in exceptional cases) to 5 years (extendable to upto 10 years in exceptional circumstances);
- To allow bids to be made from all City operational properties, rather than restrict bids to only Guildhall, Walbrook Wharf and the Barbican Centre; and
- To relax the restriction of bids to proven technologies only – allowing consideration to be given to less mature technologies.

10. The Fund was launched on 6 July 2016, with an initial deadline for bids of 19 August 2016. This was supported by

- a. An Insight Lunch;
- b. Communications on the Intranet; and
- c. Emails to, and face-to-face meetings with the departmental Energy Wardens and Energy Coordinators.

Amendments to the EEF Loan Scheme since its launch

11. In the past six months the following two amendments were proposed and agreed:

11.1 Rebranding of the fund

On 23rd September 2016 the CASC approved the re-branding of the fund from 'Energy Efficiency Fund' to 'Energy Efficiency Loan'. The rebranding deemed necessary to promote the nature of the scheme as an interest free loan.

11.2 Accessibility

It was further agreed in March 2017 Energy Board meeting that the loan shall be accessed on an on-going basis rather than organising for formal bidding rounds. This action was taken in a hope to improve the uptake of the loan.