



ESTATES COMMITTEE

May 2016

Sustainable Campus Fund: Business Case

Description of paper

1. This paper sets out the business case along with the governance and management and delivery mechanisms for the University of Edinburgh's Sustainable Campus Fund (SCF) for 3 years commencing in 16/17.
2. The Sustainable Campus Fund is proposed as an internal investment vehicle that provides financing to parties within the University for implementing energy efficiency, renewable energy, and other sustainability projects that generate cost savings.

Action Requested

3. Estates Committee is requested to approve funding and confirm the governance and delivery mechanisms for a Sustainable Campus Fund of £2.75M over 3 years commencing in 2016/17 and Year 1 budget of £750,000.

Recommendation

4. Sustainable Operations Advisory Group (SOAG) recommended to Estates Committee to invest in a 3 year Programme with an amount of £750k for year 1 (2016/17) rising to £1M for years 2 and 3.
5. Following initial review by Estates Committee (March 2016) this paper provides a fuller business case, to clarify: a) the financial case and benefits of the proposed investment; and b) how the process would be managed, governed and delivered.

1. Background and Discussion

6. Opportunities for cost and carbon savings have sparked investment vehicles at Universities around the world. Top performing universities in the US such as Harvard, Caltech and Stanford have invested in campus sustainability funds with estimated returns on investment (ROI) often exceeding 30%.
7. In 2014/15 the utilities costs for the University were approximately £17M. Purchased electricity and gas used to power and heat our buildings is the most significant of these costs. The costs for utilities are expected to continue to rise and in 2 years, extrapolating from recent trends, could be from £21.2M to £27.4M and by 2025 £25M to £40M.
8. Despite clear financial opportunities linked to energy efficiency and carbon savings around the University, there is often no consistently effective way to unlock funding or to support local initiatives. The decentralisation of utilities costs (to place ownership of these costs at the appropriate level) remains a medium-term goal, but in its absence, drivers to secure energy efficiency are not as strong as they could be.

2. Sustainable Campus Fund Objectives

9. The fund is expected to meet 4 objectives:
 - Unlock and help deliver the target of a 10% reduction in energy costs over 2 years from a 2014/15 baseline by providing necessary funding.

- Contribute to reductions in carbon emissions (with a carbon target saving for the fund to be explored in due course).
- Raise awareness of, and secure greater buy in for, opportunities to delivery energy, carbon and cost savings across the University campuses.
- Stimulate local action, discussion and innovation in order to reduce the ongoing growth in energy costs in the longer term

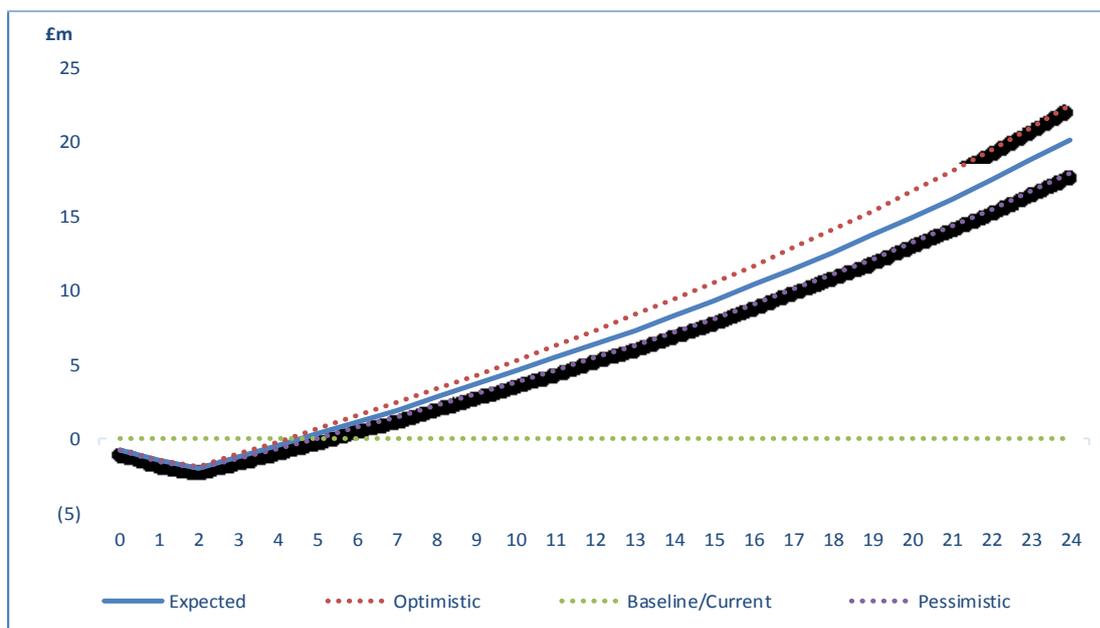
3. Financial Assessment

10. An initial assessment of opportunities has found that investing £2.75M over 3 years would bring estimated financial returns of £614,000 per annum in addition to reducing our carbon. The Finance Department has assisted with creation of a financial model using the new financial tool, enabling review and testing of initial assumptions. Based on evidence gathered and a pipeline of potential projects, we estimate a simple payback period of 5.1 years, NPV of c£8.2m and an Internal Rate of Return of 30% (see **Figures A** and **B** below).

Figure A: Sustainable Campus Fund – Financial Summary

<i>Project Summary</i>			
Project Name:	Sustainable Campus Fund	UoE Investment	
Project Sponsor:	Dave Gorman and Garry Jebb	Payback	5.1 years
Project Start:	01/08/2016	↓	
Operational Start:	01/08/2018	Discounted Payback	6.3 years
Total Project Budget (£k):	2,750	Total Investment	
External Funding (£k):		Payback	5.1 years
Internal Funding (£k):		↓	
Basis / Scenario:	Expected <small>Select Scenario</small>	Discounted Payback	6.3 years
Project Sponsor Sign Off:	No	Key Decision Metrics	
		NPV at 5.6% (£k)	8,255
		IRR	30.5%

Figure B: Sustainable Campus Fund – Cumulative Savings Over Time



11. A pipe line of projects includes opportunities in buildings and infrastructure, heating and lighting, and laboratory-specific interventions. Location reviews and

audits have taken place to identify savings and investment opportunities and will continue. It is understood that if and when a fund is announced more (and possibly better) projects would be identified- initial interest from School management teams appears high. **Table 1** (below) provides a list of proposed projects and a more detailed list is included within the Financial Model.

Table 1: Pipeline of Potential Projects

Project Name	Location	Project Cost	Est £ Annual Savings (no VAT)	Est Annual Savings (kWh)	Est Annual tCO2 savings	£/tCO2e	Pay Back (Yrs)	NPV	IRR
Replace CV fume cupboards with VAV	Estate Wide	161,000	46,000	460,000	230	35	3.5	363,812	28%
Install demand based ventilation controls RETROFIT (Roslin)	Roslin Inst	150,000	56,000	560,000	280	31	2.7	429,909	37%
Replace standard air flow fume cupboards with low flow fume cupboards	Estate Wide	140,000	32,000	320,000	160	44	4.4	226,571	22%
Demand based ventilation	SCRM	125,000	31,250	312,500	156	47	4	200,800	24%
Replace CV fume cupboards with VAV	Estate Wide	87,500	25,000	250,000	125	35	3.5	197,724	28%
Replace standard air flow fume cupboards with low flow fume cupboards	Estate Wide	52,500	12,000	120,000	60	44	4.4	84,964	22%
BEMS adjustment to occupancy/day	Estate Wide	51,000	51,000	680,340	340	10	1	433,269	100%
Controls (e.g. PIR/Lux sensor)	Estate Wide	61,250	20,200	202,000	136	38	3.0	110,970	32%
Loft insulation/m2	Central Area	72,000	9,360	162,000	81	44	7.7	36,869	12%*
Modernise lab equipment for energy efficiency gains	MVM/SE	72,600	63,900	639,000	320	13	1.1	425,724	73%*
Identified lighting upgrades	Estate Wide	127,000	39,000	390,000	195	54	3.3	205,317	29%*
Pipeline of Initial Projects > 1,000,000									

*Estimated (due to project bundling assumed for capitalisation)

12. Table 1 contains initial proposals, but given that an application based process with local buy-in is proposed, then it may be that more attractive initial projects may come forward once funding is secured. Proposed projects would be judged using a points-based system that considers financial payback and minimum ROI of 6%, carbon savings, match funding, innovation, creativity, collaboration and additionality. Table 2 provides details of scoring and weighting proposed for assessment (similar to criteria used in other successful funds such as HEFCE's)

Table 2: Proposed Project Criteria Matrix

Score	1	2	3	4	5	weight				
Payback score (yrs)	8	7	7	5	5	3	3	1	1	1.5
ROI score (%)	6%	45%	45%	75%	75%	100%	100%	200%	200%	1
Match funding score (% funded by School/Unit)	10%	20%	20%	35%	35%	50%	50%	60%	60%	1.5
Carbon saving score £/tCO ₂ e	600	500	500	400	400	300	300	200	200	1

Annual carbon saving score tCO ₂ e	1	150	150	350	350	850	850	1600	1600	1.5
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4. Governance, Management and Delivery of the Sustainable Campus Fund

13. Overall governance will be via Estates Committee (annual review) with project final approvals and fund accountability via Director of Estates and Director of SRS. Diagram 1 (below) shows the responsibilities mapped in relation to project steps with further details on accountabilities and responsibilities in Annex 1.

Diagram 1: Sustainable Campus Fund Delivery



14. Management and delivery will be via SRS Department and Estates.

- Once the overall fund budget is approved a project fund would be set up in finance systems with a separate budget line and draw down of fund on a project by project basis.
- SRS would coordinate the promotion of the fund with support for project proposal, development, carbon assessment and review and coordinate the administration. This would integrate within ongoing energy engagement and communications work.
- Estates Energy Office would provide technical advice on projects and potential savings.
- Projects would need to be approved (monthly) and can be scrutinised and reviewed by the Utilities Working Group
- Director of SRS and Director of Estates hold final sign off authority for project approvals
- Estates Finance would set up budget line for the fund. EBIS (or its future replacement) could be used to track project spend and progress.
- Estates and schools would lead on the project implementation/installation.
- Simple database would be updated by SRS Projects Coordinator tracking performance across key metrics
- SRS and Estates would evaluate projects for performance and lessons learned and link with opportunities for student research and engagement.

Risks and Risk Mitigation

15. Risks associated with establishing the fund include poor process controls; lack of projects coming forward; lack of capacity to deliver projects; and overly onerous applications process. These risks will be managed by establishing a mechanism and scoring system to ensure control of project flow plus suggested Head of School approval. An additional control will come via the use of the Utilities Working Group and final approval panel. Overall, risks are expected to be modest as similar funds have been established amongst our peers with few reports of significant problems.

Risk	Likelihood	Impact	Risk Management / Mitigation Strategy
Lack of projects coming forward	Low	High	Communications and promotion via web and social media as well as school administrative channels and energy coordinators. Work in 15/16 to identify potential projects for funding.
Overly onerous applications process	Low	Med	SRS Engagement team will support the applications. Process will be monitored to ensure agility and fit for purpose.
Lack of ability to quickly respond to projects	Low	Med	Fund would need ongoing approval ability to enable quick decision making on linked projects. Monthly approval gates.
Lack of capacity to deliver/ install projects post approval	Uncertain	High	Utilities Working Group will include key Estates staff and advise on implementation.
Poor process controls	Low	Med	Controls built into process as above.
Poor initial estimation of project savings	Medium	Med	Anticipated projects are based on industry standards and available evidence.

Resource Implications

16. Establishment of the Fund will aid with the delivery of the Corporate Services Group target of a 10% reduction in energy spend as well as assist with the delivery of the Climate Strategy. Current analysis within the financial model predicts £654,000 savings per annum at the end of year 3.

17. Based on experience elsewhere, the fund would not only generate cost effective financial saving but would help promote greater efficiency and wider engagement with the University's sustainability goals.

18. Resources to develop, manage and report on the fund will come from existing resources in Estates and the Department for SRS.

Equality & Diversity

19. Research worldwide has found that incorporating gender perspectives into energy projects, policy and planning is important to ensure effectiveness. Participation in fund activities will be monitored as possible to review any potential differences for women and men.

Next steps/implications

- Prepare communications materials (June) and an interactive webpage to test ideas against project criteria
- Update pipeline of projects with Utilities Working Group
- August launch and ongoing engagement with Schools
- End of August first projects approval review
- Regular reports will be submitted back to Estates Committee based on at least an annual report.

Consultation

20. The following groups and individuals have been consulted: SRS Committee; Sustainable Operations Advisory Group (SOAG); Sustainable Labs Steering Group; Directors of CSG, Finance, SRS; Assistant Director (Catering) Accommodation Services; Heads of Schools of Chemistry and Biology; Registrar of CSE; Director of CBS; Director of ECCL; Director of GESA; Director of Estates; Registrars in MVM and CSE.

Further information

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Accompanying Annexes

22. Annex 1: Fund Approval and Governance

Freedom of Information

23. This is an open paper



Annex 1: Fund Approval and Governance

The following table outlines roles and responsibilities of key staff in the fund’s implementation.

Committee/Individual	Role	Responsibilities
Estates Committee	Oversight and fund holder	Authorise the fund Define principles and governance of the fund. Oversee performance on an annual basis
Utilities Working Group (sub group of SOAG)	Scrutinise, improve, endorse projects	Provide assurance on projects Provide recommendations on projects prior to final sign-off from Directors of Estates & SRS
Director of SRS and Director of Estates	Accountable for fund investment	Effective investment of the fund
Committees and Governance Manager	Management of bids to the fund	Keep up to date records of funding bids along with status and sign-off Maintain project tracker on behalf of Utilities Working Group
Head of SRS Programmes	Management of the fund	Effective management of the fund as part of the wider energy and carbon savings programme working to 10% reduction of energy. Responsible to Director of SRS
SRS Engagement Manager and Project Analyst	Project development	Develop projects through engagement work with Energy Coordinators and other sustainability champions across the University. Track and evaluate fund applications and project implementation in line with agreed metrics. Seek projects to the value of £100k in labs and £140k in Y1 and £150k in Y2 in other small scale projects. Provide compliant bids to Utilities Working Group for review and to Directors of SRS and Estates for sign-off
Estates Operations Manager	Project implementation	Provide timed implementation plan for signed off projects Ensure timely implementation of projects to align with energy savings valued £200k in Y1 and £300k in Y2
Climate Policy Manager	Fund performance	Quarterly and annual report on fund performance
SRS Communications Manager	Fund promotion	Stimulate interest in the fund Gather and communicate success stories of funded projects and lessons learned
Heads of School	Project approval in their areas	Approve projects where funds are bid for
Small Works / Premises Teams	Project delivery	Delivery and implementation of projects and / or integration into other works