

Decision maker:	Director for Economy and Place
Decision date:	11/03/2019
Title of report:	Energy efficiency measures in corporate estate
Report by:	Marches Sustainable Energy Project Officer, Economy, Communities and Corporate Directorate

Classification

Open

Decision type

Non-key

Wards affected

Countywide

Purpose and summary

This report seeks approval to

- Implement a number of energy efficiency and renewable energy projects using the council's ERDF funded Sustainable Energy in Public Buildings (SEPuBu) project that currently offers up to 50% capital funding towards energy efficiency measures in public buildings.
- And delegated approval for the Assistant Director for Regulation, Environment & Waste Services to approve any future works that will utilise SEPuBu grant monies.

The projects detailed in this report are summarised in the table below:

	Upgrade to LED lighting	Advanced lighting controls	Boiler optimisation	Gas boiler replacement	Replacement heat exchanger	Solar PV
8 St Owen St	X	X		X		
Hereford Crematorium	X	X			X	
Museum Learning Resource Centre	X	X				

Blueschool House		X	X			
Bromyard Multi Agency Office (MAO)						X
Leominster Multi Agency Office (MAO)	X					X

Recommendation(s)

That:

- a) LED lighting and advanced control systems be installed at Hereford Crematorium, 8 St. Owen Street, Museum Learning Resource Centre, Leominster MAO and enhanced lighting controls to be retro-fitted onto LED lighting at Blueschool House at a cost not more than £87,820;
- b) Boiler optimisation controls are installed at Blueschool House at a cost of no more than £1,850;
- c) A new condensing gas boiler is installed at 8 St. Owen St at a cost of not more than £36,250;
- d) Replace the non-functioning heat exchanger at the Hereford Crematorium at a cost not more than £3,000
- e) Solar PV systems are installed at Bromyard MAO and Leominster MAO, at a cost of not more than £80,000; and
- f) The Assistant Director for Regulation, Environment & Waste Services be authorised to take all operational decisions necessary to implement the above recommendations.
- g) The Assistant Director for Regulation, Environment & Waste Services to be authorised to take all operational decisions necessary to allocate remaining SEPUBu programme funds having regard to the recommendations of the SEPUBu Board, and in accordance with the criteria set out in the approved project application for the approved SEPUBu programme at appendix 1. The maximum project value is limited to £500,000.

Alternative options

1. Do nothing

The council will not benefit from the financial and carbon savings these projects offer.

2. Proceed without grant funding

All the above measures are part grant funded via the ERDF Sustainable Energy in Public Buildings (SEPUBu) project.

Proceeding without the grant funding would result in a doubling of the costs and payback periods outlined in this report. This will adversely affect the council's ability to deliver both energy and carbon savings 2018/19 and the council's ability to deliver against its carbon reduction targets for the SEPUBu programme.

Key considerations

3. The ERDF funded Sustainable Energy in Public Buildings (SEPuBu) project as approved by the Director for Economy, Communities & Corporate on 21 March 2016 supports the installation of low carbon measures across the Marches public estate, which will result in reduced revenue costs, contribute to carbon emission targets and enhance the local low carbon economy.
4. The project funds, provides advice, installs and showcases the installation of low carbon technologies in 27 public buildings across Herefordshire, Shropshire and Telford & Wrekin. The project focuses on whole building retrofit using a mixture of existing, and near to market measures. Match funding is provided through existing capital budgets where 'invest to save' funding has been identified. 50% grant is available in Herefordshire for whole building retrofit and next phase technologies.
5. **LED Lighting and controls – 8 St. Owen Street, Museum and Learning Resource Centre, Hereford Crematorium & Leominster MAO**
 - a. This proposal seeks to replicate the successful LED lighting project installed at Plough Lane by upgrading the lighting to LED. In addition, enhanced lighting controls will be installed to optimise the lighting levels for employees comfort and deliver further energy and cost savings.
 - b. Specialised 'advanced lighting controls' for the lighting (including built in occupancy and daylight harvesting where possible) at the above offices will further enhance savings whilst also benefitting employees who use the buildings. The inclusion of enhanced controls draws on the feedback from employees where lux levels are found to be too high in certain areas. Advanced controls will prevent total lux levels exceeding a maximum threshold.
 - c. This project will reduce the significant energy consumption on site and will result in reduced maintenance pressures as the LED lighting have a much longer life than the existing lighting.
6. **LED Lighting Controls – Blueschool House**
 - a. This proposal is to further improve the new LED lighting at Blueschool house by installing enhanced lighting controls as outlined above. This will optimise the lighting levels for employee and visitor comfort whilst delivering further energy and cost savings.
7. **Boiler Optimisation – Blueschool House**
 - a. The proposal is to install optimisation controls for the boiler to reduce energy wastage. This will lead to energy savings and enhance the lifespan of the boiler.
8. **Boiler – 8 St. Owen Street**
 - a. This proposal is to install a gas-condensing boiler in the basement at 8 St. Owen Street. As a Grade II listed building certain improvements to the existing set up will have to be made. It is the intention to part fund the new boiler using SEPuBu. A new boiler and associated flue will ensure the building operates at maximum levels of efficiency, saving energy, money and carbon. The boiler at 8 St. Owen Street is due for replacement in 2019.

9. Heat exchanger – Hereford Crematorium

- a. The proposal is to install a replacement heat exchanger onto the cremators to generate financial savings by using waste heat to heat the building and reducing overall energy consumption and therefore energy costs and carbon on site.

10. Solar PV – Bromyard and Leominster MAO

- a. The proposal is to install a solar PV system on the roof of Bromyard and Leominster MAO in order to generate financial savings.
- b. The solar PV array project, based on current projections and use of grant funding, will realise a projected financial benefit to the council in the region of £80k over 20 years.

Summary

11. The implementation of the above projects will result in reduced revenue costs, reduce future energy cost pressures, will help to deliver the council's carbon reduction target and associated SEPUBu targets.
12. Procurement will commence following approval with the works anticipated to follow the below schedule:

	Install of measures
8 St Owen St	Lighting - End June 2019 Boiler and heat exchanger - Oct 2019
Hereford Crematorium	End June 2019
Museum Learning Resource Centre	End Sept 2019
Blueschool House	End June 2019
Bromyard Multi Agency Office (MAO)	End June 2019
Leominster Multi Agency Office (MAO)	End June 2019

13. All measures will be procured in line with the Council's contract procedure rules with support from Commercial Team. Contracts finder will be used where the threshold level is reached.

Community impact

14. These proposals will contribute towards the delivery of the aims within the council's corporate plan to 'support improvement in the quality of the natural and built environment' and 'to make best use of the resources available in order to meet the council's priorities'.
15. These projects will improve the council's energy efficiency, reduce its carbon footprint, provide cost savings and contribute towards the SEPUBu objectives and targets.
16. All installations will comply with the construction design management, CDM regulations 2015.

Equality duty

17. Under section 149 of the Equality Act 2010, the 'general duty' on public authorities is set out as follows:

A public authority must, in the exercise of its functions, have due regard to the need to -

- (a) eliminate discrimination, harassment, victimisation and any other conduct that is prohibited by or under this Act;
 - (b) advance equality of opportunity between persons who share a relevant protected characteristic and persons who do not share it;
 - (c) foster good relations between persons who share a relevant protected characteristic and persons who do not share it.
18. The public sector equality duty (specific duty) requires us to consider how we can positively contribute to the advancement of equality and good relations, and demonstrate that we are paying 'due regard' in our decision making in the design of policies and in the delivery of services. As this is a decision on back office functions, we do not believe that it will have an impact on our equality duty.
19. The public sector equality duty (specific duty) requires us to consider how we can positively contribute to the advancement of equality and good relations, and demonstrate that we are paying 'due regard' in our decision making in the design of policies and in the delivery of services. Our providers will be made aware of their contractual requirements in regards to equality legislation.
20. Where a decision is likely to result in detrimental impact on any group with a protected characteristic it must be justified objectively. This means that attempts to mitigate the harm need to be explored. If the harm cannot be avoided, the decision maker must balance this detrimental impact against the strength of legitimate public need to pursue the service change. There are no impacts on any groups with protected characteristics due to the positive nature of the works and the purely back office nature of the upgrades.

Resource implications

21. The estimated capital costs and energy savings are summarised in the below table:

Site	Current annual energy cost	Annual energy cost with proposed new technologies	Estimated Capital Cost	Estimated Capital Cost to HC after grant	Proposed annual energy savings	Payback period inc. 50% grant funding
	£	£	£	£	£	£
LED LIGHTING & CONTROLS						
8 St. Owen St	1,696	400	27,040	13,520	1,300	10.4 years
Hereford Crematorium	1,610	510	21,500	10,750	1,100	9.7 years
Museum Learning Resource Center(excludes store areas)	976	475	14,200	7,100	480	14.7 years
Blueschool House	2,600	2,080	9,000	4,500	520	8.6 years
Leominster MAO	N/A**	600	16,080	8,040	1000	8 years
OTHER ENERGY EFFICIENCY MEASURES						
Boiler – 8 St. Owen St	3,582	2,450	36,250	18,125	1,007	17.9 years*
Heat exchanger – Hereford Crematorium	1,718	1,547	3,000	1,500	171	8.7 years
Boiler optimisation - Blueschool	1,975	1,695	1,850	925	280	3.3 years
SOLAR PV						
Leominster MAO			40,000	21,000	2,021	10.4 years
Bromyard MAO			40,000	21,000	2,021	10.4 years
TOTAL			208,920	106,460	9,900	10.2 years
TOTAL excluding boiler 8 St. Owen St			172,670	88,335	8,893	9.4 years

* excluded from calculations as work likely to go ahead with or without grant funding; ** figure unknown due to assessment needed

22. The proposal is to finance the £106,460 and remaining Herefordshire SEPUBu approved projects through the existing 'LED Office & Car Parking' (£43,910), 'Energy Efficiency' (£20,550) and 'Solar PV' (£42,000) capital budgets and leverage grant funding through the 'Sustainable Energy in Public Buildings' project of £102,460 to fund the overall costs of £208,920.

Capital Budget	ERDF SEPUBu funding (50%)	Location
LED Office & Car Parking	Yes	8 St. Owens St Blueschool House MLRC Leominster MAO
Energy Efficiency	Yes	Blueschool House Hereford Crematorium 8 St Owens St
Solar PV	Yes	Leominster MAO Bromyard MAO

23. Although the proposed lighting installations will also reduce annual maintenance costs compared to the existing lighting, these have not been included within the above

calculations. This is because the centralised Property Maintenance budgets do not include a specifically identifiable budget for lighting maintenance and so therefore this should not be considered a saving against existing budgets. It will however help to reduce the pressures on this budget.

Legal implications

24. The council has a number of statutory duties to ensure that its properties are maintained adequately and provide a safe working environment for its staff. Additionally the council has a duty to secure best value in the discharge of all of its functions. These duties support the business case for the council seeking more energy efficient solutions for its properties. The council has powers to secure grant funding from third party sources and must ensure that it complies with any conditions set by third parties in the expenditure of that funding.
25. There are no other significant legal implications arising from this report.

Risk management

26. Health and safety during the installation of the measures will be managed by working alongside the Property Services team to oversee the works and utilising contract design management (CDM) regulations and procedures.
27. The energy generation and efficiency measures outlined in this report are replications of successful projects carried out across the corporate estate. LED lights have already been successfully installed in Plough Lane and Garrick Multi Story car park among others, whilst solar PV has been successfully installed at more than 10 sites.
28. Working on the assumption that the recommendation(s) will be approved, the relevant risks will be managed at a service level and entered into the environment and waste services risk register.

Risk / opportunity	Mitigation
Grant funding from ERDF programme (SEPuBu) funding may not be utilised in a timely fashion Better working environments for staff	All installs to happen in a timely fashion to ensure continuity of funding. Enhanced lighting controls will enhance the working environment.
Health and safety during the installation of the measures	To be managed by property management team to oversee the works and utilising contract design management (CDM) regulations and procedures.
Structural surveys will be carried out on all buildings due to have solar PV installed before any works take place to ensure the building is fit to take the extra load of the solar panels	The energy generation and efficiency measures outlined in this report are replications of successful projects carried out across the corporate estate. solar PV has been successfully installed at more than 10 sites.

Consultees

29. None

Appendices

- APPENDIX 1 - Application Form - SE in Public Buildings Mar_2017

Background papers

- None identified