

Policy and Sustainability Committee

10.00am, Tuesday, 1 December 2020

Energy Management Policy for Operational Buildings - Annual Report

Executive/routine Wards Council Commitments	Routine All 18
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1. Recommendations

- 1.1 That Committee:
 - 1.1.1 Approves the revised Energy Management Policy Statement attached in Appendix 1;
 - 1.1.2 Notes progress on implementation of the Energy Management Policy and Energy Management System across the Council's operational estate; and,
 - 1.1.3 Notes that Property and Facilities Management obtained certification to ISO 50001 Energy Management System.

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Report

Energy Management Policy for Operational Buildings - Annual Report

2. Executive Summary

- 2.1 In August 2019, the Policy and Sustainability Committee [approved a new Energy Management Policy Statement](#) and agreed to receive an annual report on performance against the aims of the Policy Statement. Some minor changes have been made to the Policy Statement to accommodate recommendations from our external ISO50001 auditors. This report therefore seeks approval for a revised Energy Management Policy for the Council's operational buildings.
- 2.2 This paper provides an overview of energy management activity including progress on policy aims and objectives as well as highlighting work underway within Property and Facilities Management to support the Council's target for Edinburgh to be a net zero carbon city by 2030.

3. Background

- 3.1 The Energy Management Policy Statement (Appendix 1) sets three aims for the management of energy:
- Minimise
 - Manage
 - Promote
- 3.2 Some minor amendments have been made to the Policy since the report in August 2019. The main change is to clarify that Council procurement sits out with the current scope of the Policy. This clarification was required to address recommendations made by external ISO50001 auditors.
- 3.3 This paper reports on actions within the scope of the management system towards the Policy aims. These aims align with wider Council objectives such as the Council's 2030 net zero carbon target and Best Value.
- 3.4 Property and Facilities Management (P&FM) was awarded certification to the energy management standard ISO50001 in November 2019 and remains the

only council in Scotland to gain this certification. Certification will be subject to ongoing compliance audits with the next audit scheduled for January 2021.

- 3.5 In line with recommendations in the August 2019 report, a report regarding the feasibility of deep energy retrofit in the Council's operational estate was considered by [Finance and Resources Committee in December 2019](#). This report provided an update on current work on retrofit. In July 2020, the [Council approved](#) the use of up to £0.295m from the former Central Energy Efficiency Fund (CEEF) to enable investment in key energy efficiency initiatives. This included an initial draw down of up to £0.200m to support deep energy retrofit and the installation of solar photovoltaic (PV) panels on Council buildings.
- 3.6 The Council has set a city-wide net zero carbon target for 2030 with a Government net zero carbon target set for 2040. The Council is working with partners, including the independent Edinburgh Climate Commission which the Council co-sponsors, to develop a new 2030 Sustainability Strategy for Edinburgh. Further engagement is planned over the coming months and as part of formal consultation on the sustainability strategy. Following agreement of a draft strategy by the Policy and Sustainability Committee in the new year, public consultation on a draft strategy will take place in spring/summer 2021 ahead of the final strategy being formally launched in autumn 2021 to coincide with [CoP26](#) being hosted in Scotland.
- 3.7 P&FM are working with colleagues in Strategy and Communications to support the development of the 2030 Sustainability Strategy for Edinburgh. This includes leading on property related improvement priorities identified under the short window improvement plan.

4. Main report

- 4.1 The policy outlines three core aims: minimising; managing; and promoting. These are targeted as follows.
- Minimising**
- 4.2 To minimise energy use, focus is given to building better, improving our estate and generating renewable power on site.
- 4.3 **Building better** – The Council has committed to Passivhaus being the default standard for Council new build. This is captured under En13 of the Council's short window improvement plan. At present 5 Passivhaus projects are under development comprising 1 high school, 3 primary schools and 1 archive store.
- 4.4 **Improving our estate** – P&FM are developing a strategy for the energy efficient retrofit of the Council's operational buildings. This is captured under EN11 of the Council's short window improvement plan. Funding of £100k has been secured to support this agenda. Proposals are underway to execute a pilot on a small sample of buildings utilising the Passivhaus Enerphit standard. This work will help inform future property lifecycle and refurbishment works.

4.5 **Generating renewable power** – P&FM’s renewables strategy (captured under En10 of the short window improvement plan) focusses on targeting the best opportunities to increase our renewable generation. Solar PV is the most suitable technology for the Council’s operational estate due to its compatibility with the urban environment and relatively low maintenance requirements. P&FM is targeting increased solar generation on new builds and aligning retrofit solar PV projects with roof works being carried out through the Asset Management Works Programme. The additional £100k of funding secured will support enabling/survey works and provide contingency to existing [SALIX](#) funds (which are based on payback). In addition, the Council has supported the expansion of community renewables across Council and Edinburgh Leisure properties through support of further solar installations by [Edinburgh Community Solar Co-operative](#) and through the installation of community owned panels on [Duddingston Primary School](#). The Council now has over 1.6MW of installed solar capacity across its operational estate with capacity set to grow further during 2020/21.

Managing

4.6 Table 1 below details some headline energy data for energy consumption for 2018.19 compared with 2019/21.

Table1: Energy Consumption

	2018/19	2019/20
ELECTRICITY (GWH)	46.1	45.3
GAS (GWH)	124.4	127.0
CARBON (TONNES CO2)	36,877	34,745
COST (FM)	£9m	£9.8m

4.7 Total carbon emissions in operational buildings totalled 34,745 tonnes. This represents 45% of Council emissions as reported under the Public Bodies Climate Change Duties Report 2019/20. The greening of the electricity grid has resulted in the carbon factor for electricity reducing by 11% between 18/19 and 19/20, contributing to much of the reduction in Council emissions.

4.8 As the Council’s gas use is predominantly required to meet thermal demand in buildings, its use is proportional to the severity of the weather in any given year. 2019/20 was marginally (circa 4% in terms of space heating metrics) colder than 2018/19 and accounts for much of the increase in gas use.

4.9 Reductions in electricity are attributable to energy efficiency improvements and increased generation of electricity through combined heat and power plant. Property closures during March 2020 will also have had a modest impact on

19/20 electricity use. Carbon reductions associated with property closures in 2020/21 will be more significant.

- 4.10 Managing energy requires monitoring, investigation and control. It also requires legal obligations to be met, with compliance tracked and registered as part of P&FM's energy management system.
- 4.11 **Monitoring** –P&FM have robust procedures in place to ensure accurate monitoring and analysis of consumption. This provides the platform to inform statutory reporting requirements and provides the foundation for periodic review of energy performance and utility budget management, forecasting and targeting. Current priorities include adapting forecasting models to account for recent operational changes and improving the energy software set up which has lost functionality due to remote working. This presents a risk to future monitoring including budget management and ISO50001 compliance and P&FM are pursuing alternate solutions with ICT/CGI.
- 4.12 **Investigation** – Using available energy data and associated tools to drive energy performance monitoring is a cornerstone of energy management. Smart meter data is a critical tool to set real time alerts for changes to building performance and can help in determining appropriate interventions especially given recent challenges accessing buildings. Most the Council's electricity smart meters are nearing end of life and work is underway to procure replacement infrastructure.
- 4.13 **Control** – P&FM continue to implement improvements to Building Energy Management System controls across its estate. The functionality that this provides has proved vital in helping to remotely monitor and manage performance of heating and ventilation plant in buildings during recent disruption to building operation. To realise efficiencies, attention has been given to ensure operation of plant is in line with new occupation patterns.

Promoting

- 4.14 Promotion of energy management is an awareness focused element of the energy management system and a key requirement for ISO 50001. It includes informing partners of energy use and promoting activities and best practice.
- 4.15 **Informing Partners** – An oversight group with representatives from across P&FM has been set up to support a collective understanding and input into energy strategy. This has helped ensure a coordinated approach to the key objectives detailed in this report and is critical for identifying opportunities for improvement. This extends to focussed awareness raising activities to ensure that staff have both the knowledge and tools to deliver on strategies. Engaging and supporting local FM staff to assist in improving energy efficiency will be a continued focus over the coming year.
- 4.16 **Promoting Best Practice** – As a team P&FM regularly work with external partners to both share best practice and participate in research. Recent engagement has included discussions on net zero carbon building standards,

district heating proposals and deep energy retrofit. Discussions are also underway with Edinburgh Community Solar Cooperative regarding the installation of battery storage at 3 schools that already host community owned solar panels. The proposal has received a Scottish Government [CARES](#) grant and is currently under review by Council officers. Whilst the project has limited financial benefit for both parties, it offers an opportunity to explore and test an emerging energy solution and share best practice with other stakeholders.

5. Next Steps

- 5.1 With adoption of Passivhaus standard by the Council and subsequent progress with projects entering design, the main strategic objective is to develop an approach for demand reduction and decarbonisation across the Council's existing operational estate that reflects the ambition of the Council's 2030 target. As such, the pilot into Enerphit will be a key focus over the next year
- 5.2 Work will continue on retaining ISO50001 certification of P&FM's Energy Management System. Given current challenges with software operation, this will be a key focus over the coming months.
- 5.3 Opportunities for external funding will continue to be pursued where they align with strategic objectives and complimentary benefits can be realised.

6. Financial impact

- 6.1 Financial efficiencies are a clear driver for the Energy Management Policy and associated ISO50001 procedures. Financial efficiencies are monitored and recorded alongside energy efficiencies by P&FM.
- 6.2 There is a cost associated with the implementation of ISO50001, of under £8k per annum. This represents good value in comparison to total energy spend and potential efficiencies from implementation.

7. Stakeholder/Community Impact

- 7.1 The work detailed in this report will aid the Council's objective to mitigate its carbon impacts and adapt to climate change assisting in the delivery of the Council's obligations under the Climate Change Act (Scotland).
- 7.2 Through the successful delivery of solar projects with Edinburgh Community Solar Co-operative and the Friends of Duddingston Primary School, the Council is demonstrating positive support for community energy projects.
- 7.3 By following best practice and delivering effective energy management, the Council can demonstrate carbon reduction and set a positive example for organisations within Edinburgh and more widely.

8. Background reading/external references

- 8.1 [Policy and Sustainability Committee, Tuesday 6 August 2019, Energy Management Policy for Operational Buildings](#)
- 8.2 [City of Edinburgh Council, Tuesday 28 July 2020, Revenue Budget 2020/21 Update – referral from the Policy and Sustainability Committee](#)
- 8.3 [Finance and Resources Committee, Friday 6 December 2019, Feasibility of Deep Energy Retrofit of Operational Council Buildings](#)
- 8.4 [Finance and Resources Committee, Friday 6 December 2019, The Friends of Duddingston Primary School Solar PV Proposal](#)
- 8.5 [Finance and Resources Committee, Friday 6 December 2019, Edinburgh Community Solar Co-operative – Phase 2](#)

9. Appendices

- 9.1 Appendix 1: Energy Management Policy Statement 2020

ENERGY MANAGEMENT POLICY STATEMENT



Within the scope of its Energy Management System the City of Edinburgh Council will pursue efficiency in the management of energy usage, monitoring consumption, and ensuring on-going improvements of energy management across the Council's operational estate. The City of Edinburgh will seek to be an exemplar to other public bodies.

The Policy Aims are:-

- Minimise: We will minimise energy consumption¹
- Manage: We will achieve ongoing improvements through recording, benchmarking, monitoring and reporting on energy usage across the Council
- Promote: We will promote the conservation of energy amongst Council employees, contractors, partners and the wider communities we serve

The Policy's key objectives are: -.

- minimise energy consumption through building design and specification
- minimise energy consumption through appropriate operation and control
- to monitor the implementation of the policy and to set targets for future reductions in energy use
- meet or wherever practicable, exceed the requirements of all relevant legislation and regulation, and set our own demanding standards where none exist
- monitor the use of gas and electricity through meter readings and to co-ordinate and centralise energy consumption information and costs
- to ensure that the energy suppliers are informed by Asset Management of any changes to building ownership and lease arrangements
- to promote the benefits of energy efficiency to our customer, communities we serve, partners, contractors and all our stakeholders

IMPLEMENTATION

The policy will be promoted, monitored and adequately resourced by the CEC and progress reported annually. The aims, objectives and targets will be reviewed annually. CEC will undertake publicity and provide staff with information and training on saving energy. The scope of this policy, and the activities of the Energy and Sustainability Team, does not extend to direct control over Council procurement and therefore no targets for procurement are set within this standard.

¹ Within the restrictions of providing acceptable levels of service, as defined by Council specifications, to building users.