

Policy and Sustainability Committee

10.00am, Tuesday, 17 January 2023

Energy Management Policy for Operational Buildings – Update Report

Executive/routine Wards Council Commitments	Routine All
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1. Recommendations

- 1.1 Policy and Sustainability Committee is asked to:
 - 1.1.1 Approve the revised Energy Management Policy Statement, attached in Appendix 1; and
 - 1.1.2 Note the Council's reaccreditation to ISO 50001 and continued progress on implementing the Energy Management Policy and Energy Management System for Operational Buildings.

Paul Lawrence

Executive Director of Place

Contact: Paul Jones, Energy and Sustainability Manager

E-mail: paul.jones@edinburgh.gov.uk | Tel: 0131 469 3607

Report

Energy Management Policy for Operational Buildings – Update Report

2. Executive Summary

- 2.1 The report presents the current version of the Council's Energy Management Policy for Operational Buildings for approval (Appendix 1). The report has moved from an annual to a two yearly reporting cycle.
- 2.2 The report also provides an overview of energy management activity, including steps taken to reduce Council energy consumption and associated carbon emissions, and includes an update on progress on policy aims and objectives.
- 2.3 Context is provided on recent cost increases across electricity and gas tariffs and current forecasts (which may be subject to change) are provided for 2023/24 tariffs and a high level summary is provided of some of the work underway across the Council's Operational Buildings to support the Council's target for Edinburgh to be a net zero carbon city by 2030.

3. Background

- 3.1 The Council's Energy Management Policy Statement was approved in [2019](#) and sets three aims for the management of energy:
 - 3.1.1 Minimise;
 - 3.1.2 Manage; and
 - 3.1.3 Promote.
- 3.2 The Council was awarded certification to the energy management standard ISO50001 in November 2019 and remains the only council in Scotland to gain this certification. ISO 50001 system requires a re-certification audit every three years and was last recertified in November 2022.
- 3.3 The Council spent £8m on energy across operational buildings in 2020/21, which was a reduction of around 18% on 2019/20 costs. This cost reduction was predominantly the result of large-scale closure of Council buildings during 2020/21. Energy prices stayed relatively static in 2021/22 with an increase of 4% in electricity

and a reduction of 11% in gas tariffs. Expenditure in 2021/22 in operational buildings was £9.3m.

- 3.4 In 2022/23, the Council is experiencing like-for-like increases in utility tariffs of around 26% for electricity and around 150% for gas, with forecast energy spend of circa £15.5m. Current forecasts for 2023/24 indicate further increases of around 15% for gas and 58% for electricity. Whilst final rates will not be confirmed until April 2023, and will be subject to ongoing market conditions, based on current guidance this would result in an energy spend for the Council of circa £21m in 2023/24.
- 3.5 The City of Edinburgh Council declared a Climate Emergency in 2019 and committed to work towards a target of net zero emissions by 2030 for both city and corporate emissions. Service areas are working closely with colleagues in Corporate Services to support 2030 strategies and actions.
- 3.6 The Council's operational buildings generated 30,683 tonnes of CO2 emissions. Gas use, which is predominantly used for space heating, accounted for 22,373 tonnes of CO2 or 73% of total building related emissions. Electricity accounted for 8,012 tonnes of CO2 or 26% of building related emissions with heating oil making up the remaining 299 tonnes or 1% of emissions.
- 3.7 The majority of Council emissions comes from powering and heating buildings (67% of the total in 2021/22), with natural gas use being the main contributor (69% of buildings' emissions, compared to 29% for electricity, and 2% for other fuels).
- 3.8 The last update on Energy Management Policy for Operational Buildings was reported to Policy and Sustainability Committee in [December 2020](#).

4. Main report

- 4.1 Some minor amendments have been made to the Policy since it was approved in [August 2019](#), with the main change removing a statement excluding procurement from the scope of the Policy. This change followed on from discussion with external ISO50001 auditors.
- 4.2 As noted in paragraph 3.1, the policy outlines three core aims: minimising; managing; and promoting.
- 4.3 Sitting within these aims are seven key objectives that provide the basis for the Council's ISO 50001 Energy Management System.

Minimise

- 4.4 **Building better** – The Council has set a default requirement to deliver new build properties to Certified Passivhaus Standard. This will ensure that buildings are designed to a high level of energy efficiency. The Passivhaus approach also accommodates the addition of low carbon heating plant which will ensure that new builds support net zero targets. There are currently eight projects in design targeting certified Passivhaus with Low Zero Carbon primary plant. The most

advanced are the new Maybury Primary School and the new Currie High School (both due for completion in 2024).

- 4.5 **Improving our estate** – In [August 2022](#), Policy and Sustainability Committee approved the initiation of the EnerPHit Tranche 1 Programme. The programme includes an investment of £60.85m, which is included in the Council’s [Sustainable Capital Budget Strategy 2022-32](#), and support of up to £10m via the Scottish Government’s [Green Growth Accelerator](#). The programme focuses on energy retrofit whilst drawing on the principles of EnerPHit. Unlike the Passivhaus standard for new build, where a commitment can be given to achieving certification, the approach to retrofit is more nuanced, and prioritises taking an informed approach to energy retrofit, balancing best value with thermal and low carbon improvements, rather than pursuing fully certified (and expensive) EnerPHit retrofits. This investment places the Council at the forefront of deep energy retrofit and will act as a pathfinder and exemplar for future Council operational buildings.
- 4.6 **Generating renewable power** – This Council currently has over 2.4MW (megawatt) of solar PV (photovoltaics) installed across its operational buildings, an increase in capacity of around 1 MW over the last three years. Capacity is expected to grow further as solar PV becomes an increasing feature of new build and as retrofit projects are progressed. In 2021/22, 911MWh (megawatt-hour) of onsite solar electricity was utilised in Council buildings representing just over 2.5% of total electricity used in Council buildings.

Managing

- 4.7 Table 1 below details some headline energy data for the last three financial years:

Table1: Energy Consumption

	2019/20	2020/21	2021/22
ELECTRICITY (GIGAWATT-HOURS (GWH))	45.3	37.8	42.1
GAS (GWH)	127.0	116.5	120.8
CARBON (TONNES CO2)	34,745	31,158	30,683
COST (FM)	£9.8m	£8.0m	£9.3m

- 4.8 Over the past three financial years, energy costs have remained relatively stable. However, as detailed in paragraph 3.4, energy costs have increased significantly in 2022/23 with further increases forecast for 2023/24. This brings increased focus to measures to reduce energy.
- 4.9 Current forecasts for 2022/23 indicate electricity consumption of between 42 – 44GWh. Gas consumption is more difficult to forecast as it will depend on the severity of the weather. Current indications are that consumption will fall between 110-120GWh.

- 4.10 Within their Energy Management System, Operational Services track performance against a 2019/20 consumption baseline and use an energy performance indicator based on floor area (kWh/m²). The Energy Management System currently sets a year-on-year targeted reduction of 1.5% in the energy performance indicator (overall kWh/m²). The target and baseline are subject to periodic review, to ensure it best reflects performance and supports continual improvement. In future years, the target will be adjusted to reflect initiatives detailed in the [Council's Emissions Reduction Plan](#).
- 4.11 **Control** - A review of all heating control schedules is ongoing with the aim of trimming run hours of plant where possible, whilst meeting service requirements. To support this, core hours have been agreed with Education and Catering, and processes implemented to accommodate heating requirements for building lets to ensure plant only runs when necessary. To further support cost efficiencies and carbon savings, a standardised temperature setpoint of 19°C is in the process of being implemented across Council buildings (excluding residential and special facilities). Previously there has been no fixed temperature and many buildings will have been set to heat to higher temperatures. A standardised setpoint will take time to implement but, given current cost increases, it provides a realistic opportunity for cost avoidance.
- 4.12 **Monitoring** – In line with ISO 50001 requirements, robust procedures are in place to ensure accurate monitoring and analysis of consumption providing the platform to inform reporting requirements and review of energy performance and utility budget management, forecasting and targeting. The recent installation of smart CO₂ and temperature sensors across the school estate will help with monitoring the building temperatures and identifying opportunities for improved efficiency of plant and/or controls.

Promoting

- 4.13 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. Importantly, it is a key part for improving the management and control of areas of significant energy use.
- 4.14 **Informing Partners** – An Energy Management Oversight Group has been set up with senior representatives from across the Council. The group provides a point of strategic review for energy performance, plans and activities and supports collaboration across service areas. Energy awareness activities aimed at staff with a critical role to play in energy management is a focus of future collaboration.
- 4.15 **Promoting Best Practice** – The Council continues to remain active in its approach to sharing from experience in energy management, net-zero design and retrofit. This includes engaging with other public sector partners in Edinburgh, maintaining active relationships with academia and working with the wider public sector and Scottish Government.

5. Next Steps

- 5.1 Since the last report in December 2020, the Council has made significant progress in both embedding Passivhaus as a new build standard and in developing a pioneering deep energy retrofit pathfinder project. These are key steppingstones in the journey towards a net zero Council estate.
- 5.2 The current energy crisis requires the prioritisation of immediate energy management and attention will be given to the management, control and reduction of energy.

6. Financial impact

- 6.1 Forecast at £21m, 2023/24 energy spend is set to be double the £9.3m spent in 2021/22. The increased cost of energy provides a greater opportunity for progressing spend to save proposals and helps to off-set increased costs of goods and services.
- 6.2 The Council will continue to operate a [SALIX](#) recycling fund for energy efficiency and renewable works. During COVID-19, restrictions made it difficult to progress projects and, as repayments continued to be made to the fund from previous projects, the balance of the fund increased and £605,000 (at the end of 2021/22). A pipeline of energy and renewable projects are being progressed.

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 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.
- 7.3 Engagement with service areas and trade unions has been undertaken as part of the process of implementing a standardised set point and right sizing heating schedules. An integrated impact assessment was also carried out.

8. Background reading/external references

- 8.1 [Policy and Sustainability Committee, Tuesday 17 November 2022, Council Emissions Reduction Plan – Annual Progress Report](#)
- 8.2 [Policy and Sustainability Committee, Tuesday 17 November 2022, Public Bodies Climate Change Duties Report 2021/22.](#)

- 8.3 [Education, Children and Families Committee, Tuesday 1 March 2022, Energy in Schools – Annual Report.](#)

9. Appendices

- 9.1 Appendix 1: Revised Energy Management Policy Statement

Energy Management Policy for Operational Buildings – Policy Statement

Policy statement

Within the scope of its Energy Management System the City of Edinburgh Council will pursue the efficient use of energy, monitor consumption, and ensure 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 consumption
- 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. Quantify and communicate the impact of energy and lifecycle costs in the specification of energy related equipment/SEUs.
- 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 Council and progress reported every second year by the Energy and Sustainability Team. The aims, objectives and targets will be reviewed annually. The Council will undertake publicity and provide staff with information and training on saving energy.