



REPORT TO: POLICY AND RESOURCES COMMITTEE ON 27 NOVEMBER 2018

SUBJECT: ANNUAL REPORT ON ENERGY STRATEGY/ACTIONS

BY: CORPORATE DIRECTOR (ECONOMIC DEVELOPMENT, PLANNING AND INFRASTRUCTURE)

1. REASON FOR REPORT

- 1.1 This report presents the Annual Energy Report for 2017/18 and advises Committee on actions to minimise the Council's energy consumption, as well as progress and developments on a number of energy issues.
- 1.2 This report is submitted to Committee in terms of Section III (A) (39) of the Council's Administrative Scheme relating to ensuring that the organisation, administrative and management processes of the Council are designed to make the most effective contribution to achieving the Council's objectives.

2. RECOMMENDATION

2.1 It is recommended that Committee:-

- i) considers and notes the terms of the 2017/18 Annual Report; and**
- ii) notes that in 2017/18 the Council's energy consumption in non-domestic operational properties increased by 7.4%, and the energy bill increased by 7.6% (£188,132).**

3. BACKGROUND

- 3.1 The 12th Annual Energy Report, which relates to 2017/18, is attached to this report as **APPENDIX I**, with the main issues summarised below.

4. PERFORMANCE

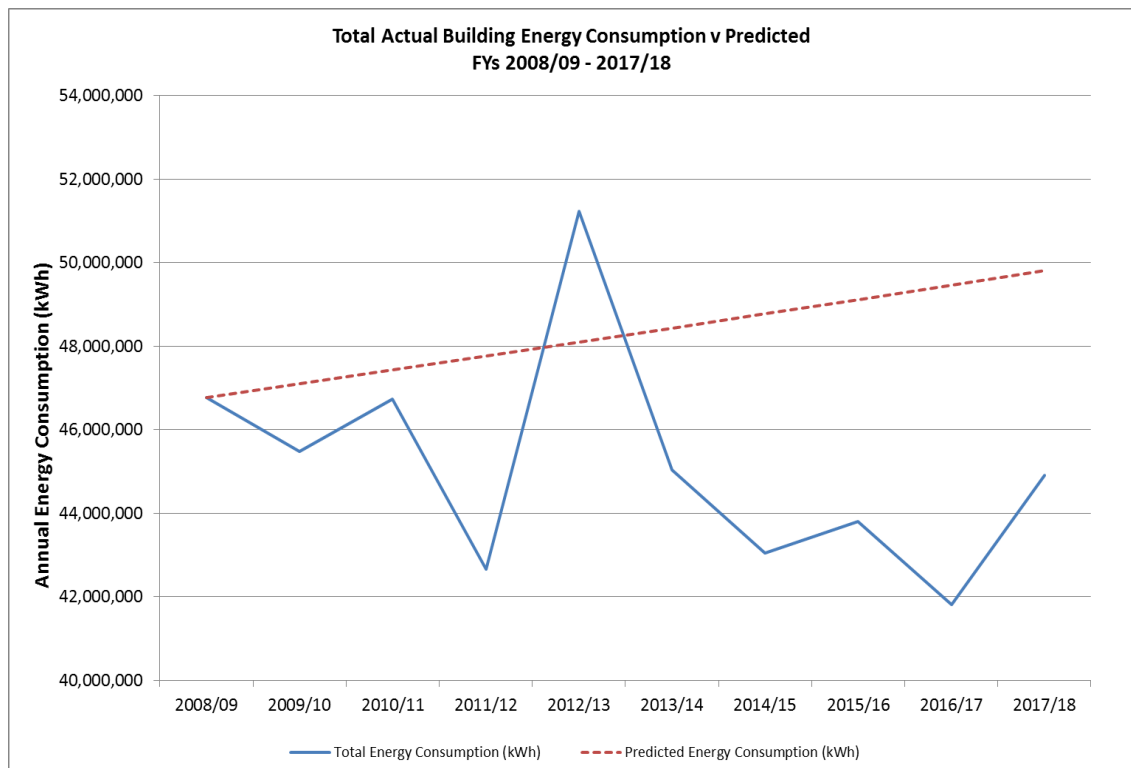
Energy Consumption

- 4.1 The Council's energy consumption (excluding street lighting) for 2017/18 was 44,901,152 kWh compared with consumption of 41,811,286 kWh for 2016/17. This is a 7.4% increase on the previous years' consumption, compared to the target of an annual 2% reduction as set out in the Council's Energy Policy and Strategy.
- 4.2 The following are contributory factors to the increase in energy consumption :-

- Windier, wetter and colder weather requires heating systems to be on for longer and to work harder. External temperatures were 7% colder compared to the previous year
- Elgin High School accounted for over a third of the Council's' total annual increase in gas consumption. Officers are assessing the reasons for the increase and the outcomes will be fed into the post project review undertaken by the client department
- Energy efficiency of buildings and heating systems reducing as a consequence of the Make do and Mend policy, including
 - Increased manual adjustment by building users
 - Greater heat loss through draughts, e.g. gaps in doors and windows not being sealed
 - Lack of automatic adjustment to warmer conditions, i.e. heating control systems not fully functioning.

(The corporate review of the Make do and Mend Policy scheduled during 2018-19, should note the associated impact on energy performance.)

4.3 The graph below shows the Council's total energy consumption for the last 9 years, compared to predicted increases based on Department of Energy and Climate Change advice.



Energy Costs

4.4 In 2017/18 the Council's energy bill at its non-domestic properties totalled £2,654,219 – an increase of £188,132 (7.6%) compared to 2016/17.

4.5 The following are contributory factors to the increase in energy costs :-

- During 2017-18 electricity, gas and oil prices rose 5.3%, 3.1% and 6.6% respectively
- Energy consumption increased by 7.4%

Carbon Emissions

- 4.6 In 2017/18 the Council's carbon emissions for its non-domestic properties amounted to 12,832 tonnes of CO₂e - a decrease of 1,063 tonnes of CO₂e (8%) compared to 2016/17.
- 4.7 The following are significant contributory factors to carbon emissions levels :-
- Decrease - More grid electricity produced from renewables and less from carbon intensive sources such as coal, gas and oil
 - Decrease - More street lighting provided from LED technology
 - Increase - Additional heat requirement due to colder weather

5. ENERGY SAVING MEASURES

Carbon Reduction Commitment Energy Efficiency Scheme (CRC)

- 5.1 CRC costs decreased from £206,085 in 2016/17 to £192,649 in 2017/18.
- 5.2 The CRC scheme is to be abolished from April 2019 and the Climate Change Levy will increase from 1 April 2019 to cover the cost of the CRC abolition.

Energy Policy and Strategy

- 5.3 Reducing energy consumption in the Council's non-domestic operational properties by 2% per annum remains the main objective of the Council's Energy Policy set out in **APPENDIX IV**. However it is considered that the an energy based reduction target is no longer appropriate, particularly given that national targets are based on carbon emissions reduction and that Moray is currently out of step with other Scottish Local Authorities.
- 5.4 It is intended to report carbon emissions as an additional performance indicator in the next Annual Energy report, contributing factors such as electricity, gas and water shall be retained, with detail relating to cost and consumption provided in a similar manner to current practice.

Building Energy Management System (BEMS)

- 5.5 There are BEMS systems in 25 Council buildings and the Energy Team use them to regularly monitor temperatures in buildings, identify anomalies early and adjust heating settings accordingly. A new technical specification is improving consistency across the Council's properties, including new-build projects and refurbishments, such as the 4-schools project and Keith Grammar School. Examples of the measures applied include performance dashboards, visibility of all setpoint & control parameters, interactive graphics of facilities and consistent representations of boiler system components and arrangements. This continues to be rolled out as and when the opportunity arises. Current financial constraints are restricting work in this area, but potential spend to save prospects will be kept under review.

Energy Awareness

- 5.6 As detailed in Section 6.1 of **APPENDIX I** various energy awareness briefings and training sessions were carried out in 2017/18, including presentations at staff inductions and school assemblies/ eco groups. These reached 52 council staff and over 900 pupils. Other initiatives have included regular articles in

the staff Connect magazine, posters and participation in Earth Hour. More such measures are being implemented in 2018/19.

Energy Audits

- 5.7 In 2017/18 the Energy Team carried out audits at 6 Primary Schools. This has resulted in a number of energy saving measures being implemented and potential energy saving projects being identified. Audits of 6 further schools are scheduled in 2018-19.

Utility Invoice Processing

- 5.8 Almost all utility invoices relevant to the non-domestic council estate are processed by the Energy Team; over 13,500 in 2017/18. The active management, checking and validation of utility consumptions and invoices identified over £64,000 of erroneous charges in 2017/18. Full details can be found in **APPENDIX III**.

Projects

- 5.9 Projects carried out in 2017/18 and potential future energy saving projects is set out in **APPENDIX V**.

4-Schools Project

- 5.10 Refurbishment of 4 Primary schools were carried out during 2016/17 which included improvements to the building fabric, mechanical and electrical systems. Analysis of energy and water consumptions of the relevant properties demonstrated that significant consumption reductions were realised. It indicates that for full school refurbishments of this type the following savings could be achieved.

Electricity Reduction	35%
Oil/Gas Reduction	27%
Water Reduction	30%

- 5.11 **APPENDIX VI** contains graphical profiles of electricity, gas and water consumptions, by school and by utility.

6. SUMMARY OF IMPLICATIONS

(a) Corporate Plan and 10 Year Plan (Local Outcomes Improvement Plan (LOIP))

The Energy Policy and Strategy and actions to minimise the Council's energy use support the aim of the Corporate Plan of a financially stable Council.

The Council's Corporate Plan 2018 -2023 and 10-year Moray Local Outcome Improvement Plan (LOIP) make no specific reference to energy efficiency or carbon emissions reduction, with the exception of the Energy from Waste project.

(b) Policy and Legal

Climate Change (Scotland) Act 2009 places a duty on public bodies to act in a way they consider most sustainable and in the way best calculated to deliver emission reduction targets set in the Act.

(c) Financial/Risks Implications

In 2017/18 the Council's energy bill for non-domestic properties was £2,654,219 – an increase of £188,132 (7.6%) compared to 2016/17.

During 2017-18 electricity, gas and oil prices rose 5.3%, 3.1% and 6.6% respectively. Recent budget guidance issued in May 2018 by Scottish Procurement indicated that by 2020-21 increases of 17-20% are forecast for both electricity and gas, cumulatively increasing the Council's costs by £452,000 compared to 2016/17.

Since the above guidance was issued there have been further significant increases in the wholesale market prices which have the potential to considerably exacerbate the Council's energy costs over the next 24 months.

The above figures do not include CRC costs which decreased from £206,085 in 2016/17 to £192,649 in 2017/18. The unit charge increased to £16.60 per tonne CO₂ in 2017/18, compared to £16.10 per tonne CO₂ in 2016/17. Further rises are scheduled until the scheme ends and is replaced from 1st April 2019 by increases in the Climate Change Levy.

During 2017-18 the active management, checking and validation of utility consumptions and invoices identified over £64,000 of erroneous charges.

Unit charges for electricity consumption accounted for 54%, whilst the indirect charges (a mixture of fixed charges and others relating to transmission, metering etc.) accounted for approximately 46% of the Council's overall electricity costs. Unit charges for gas consumption accounted for 79%, whilst the indirect charges accounted for approximately 21% of the Council's overall gas costs.

Indirect charges are predicted to continue to increase in future years, as energy consumers rather than taxpayers, meet the costs of moving to a low carbon society, as well as infrastructure improvements. Allied to anticipated increases in consumption charges (per kWh) overall energy costs are set to rise in coming years.

£15,000 has been allocated in the Council's 2017/18 capital plan and £19,200 in the Council's revenue plan for energy saving projects and awareness raising initiatives, although officers will also continue to take forward spend to save proposals.

(d) Staffing Implications

There are no staffing implications.

(e) Property

The property implications are as set out in this report.

(f) Equalities

There are no equalities implications.

(g) Consultations

The Head of Housing and Property, the Head of Financial Services, the Head of Development Services, the Design Manager, Paul Nevin, Senior Solicitor, the Equal Opportunities Officer and the Democratic Services Manager have been consulted and any comments incorporated in this report as appropriate.

7. CONCLUSION

7.1 The Council's utility consumption and costs rose by 7.4% and 7.6 % respectively in 2017/18. The primary contributing factor was much colder temperatures during the heating season compared to the previous year. In addition unit costs increased for all utilities.

7.2 There is still potential for reductions in energy consumption through a programme of energy projects, property rationalisation, use of Building Energy Management Systems and staff awareness/behaviour changes. These are necessary to minimise the Council's carbon emissions, energy costs and the associated impact of the Carbon Reduction Commitment Energy Efficiency Scheme/Climate Change Levy.

Author of Report: Ronnie Macdonald, Energy Officer
Background Papers: As referred to in this report.
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