

LISBURN & CASTLEREAGH CITY COUNCIL

AUTOMATIC MONITORING & TARGETING POLICY

Version History

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1 INTRODUCTION

Automatic monitoring and targeting (aM&T), through robust automatic meter reading (AMR) and effective interpretive software, gives organisations visibility of their energy use. Without that visible data - clearly presented and easily accessed – energy reduction strategies can't gain traction. aM&T helps to identify and quantify signs of avoidable waste or other opportunities to reduce consumption.

2 STRATEGIC CONTEXT

The strategic aims and objectives of the aM&T Project are set in the context of the following:

A. Compliance with legal requirements

The main regulatory schemes, which aim to reduce energy consumption and carbon dioxide emissions require:

- accurate energy and emissions data with auditable evidence trails
- effective management systems for data handling and other required information

i) NI Legislation

The Northern Ireland (Miscellaneous Provisions) Act 2006.

- A “Sustainable Development Statutory Duty” came into effect for Councils in N. Ireland as a result of this legislation. The Act states that “A public authority must, in exercising its functions, act in a way it considers best calculated to contribute to the achievement of sustainable development in N. Ireland”

The Strategic Energy Framework (SEF), NI Assembly 2010.

- NI agreed targets for 40% of Electricity and 10% of Heat Energy in N. Ireland as a whole to be provided from Renewable sources by 2020. This is not a statutory requirement.

NI Greenhouse Gas Emissions Reduction Action Plan

- NI Greenhouse Gas Emissions Reduction Action Plan endorsed by the Assembly in Feb 2011, sets a target to reduce CO₂ Emissions by at least 25% below 1990 levels before 2025.

ii) National/International Legislation

The Climate Change Act 2008 (2050 Target Amend) Order 2019

- The Act commits UK Government (and devolved administrations) to reducing GHG, including CO₂, emissions by 100% of 1990 levels (net zero) by 2050
- Currently Scotland, Wales and Northern Ireland account for about 20% of the UK's GHG emissions.

The EU Renewable Energy Directive 2009 (EU: RED)

- UK set a target for 15% of all energy used across the UK to come from renewable sources by 2020. NI set a target of 20%, and will achieve this target.

B. LCCC Corporate Plan

LCCC Strategic Theme 4 of the Council's Corporate Plan focuses on 'Where we live' and contains a key priority area that directly reference's energy as follows:

- to work with residents, businesses and partners to **reduce energy consumption**, increase recycling and encourage community clean-ups.

The aM&T project aims to proactively manage energy consumption and target energy reduction in LCCC buildings and is compatible with our strategic objective.

3 ASSESSMENT OF NEED

The proposed aM&T system will measure, monitor and manage LCCC energy usage (including water), which will enable more accurate and timely identification of energy and water wastage. To date, we have not measured our utilities on a short-interval/automatic basis, therefore miss opportunities to manage and reduce our energy consumption.

LCCC will use the aM&T system to identify areas of energy wastage, target opportunities to save energy and to verify actual savings after completion of energy efficiency projects. LCCC carbon footprint will be reduced. We currently have no method of accurately determining our carbon footprint or measuring payback on investment in energy efficiency projects. If we don't carry out the aM&T Project, we will not realise energy savings and CO₂ emission reduction targets in line with our Local/National/International objectives.

4 OBJECTIVES, TARGETS AND CONSTRAINTS

The main objectives of the aM&T Project are:

- Comply with the EU/National/Devolved legislation
- To analyse and report on the energy performance of buildings with a view to detecting avoidable excess consumption and realise energy and carbon reduction.
- Quantify the savings achieved by energy saving projects in a manner that accounts for factors such as variations in weather.
- Identify areas for further investigation and action prompted by unexpected patterns of consumption.
- Provide utility awareness campaigns and feedback to staff on the results of those campaigns.
- Improve budget estimations by setting energy consumption targets, therefore treating energy as a variable cost and not accepted as a fixed, uncontrolled cost.
- To undertake performance benchmarking.

The main targets of the aM&T Project are:

- To use the aM&T software to monitor carbon emissions and report on carbon savings.
- The aM&T software to monitor and generate exception reports, which will identify avoidable energy consumption.
- aM&T software to analyse comparative data on each meter location (pre & post works) to show project improvements accounting for weather variations, and other driving factors.
- aM&T software to have alert messages sent to responsible officer/s when consumption exceeds pre-set values.
- The aM&T system to have a real-time interrogation platform for **some staff** with energy-use responsibilities and a **view-only** dashboard, accessible to **all staff** so that energy consumption and carbon emissions are visible. Dashboards are energy monitoring displays that communicate in real-time with utility meters to show the viewer how much energy the particular building is using, what it's costing and how much carbon dioxide (CO₂) is being produced. Dashboards will be located in public reception areas at high energy-using sites and on the Staff Intranet. This will improve staff and public awareness of energy use in LCCC buildings with the aim of modifying and improving energy-use behaviours.
- It will also provide performance benchmarking of meters against targets to identify any non-compliance.
- The aM&T system to have built-in energy consumption targets for each utility to reflect LCCC Annual Energy Reduction Targets of 3% for electricity, 3% for gas and 3% for water based on 2017/18 energy consumption.

The main constraints of the aM&T Project are:

- aM&T system future expandability at reasonable cost could be restrictive.
- Reliable signal strength for Wi-Fi data upload from metering point to central location.
- Engagement from staff / building users.
- Maintain use of aM&T output data in future.

5 CONCLUSION

The successful implementation of the aM&T Policy will facilitate close monitoring and thus control of Council buildings energy consumption and in doing so will provide cost and carbon savings. Residents will benefit in knowing that council buildings carbon emissions and energy consumption will be managed better and in line with national and local legislation.