

Intelligent Metering

EIE/04/107/SO7.38635

January 2005 - December 2006

**Energy Savings from Intelligent
Metering and Behavioural Change :**

Training Building Occupants

Background

▶ Increasing energy costs

- Recently energy costs have been increasing
- E.g. electricity by ? % and gas by ? %

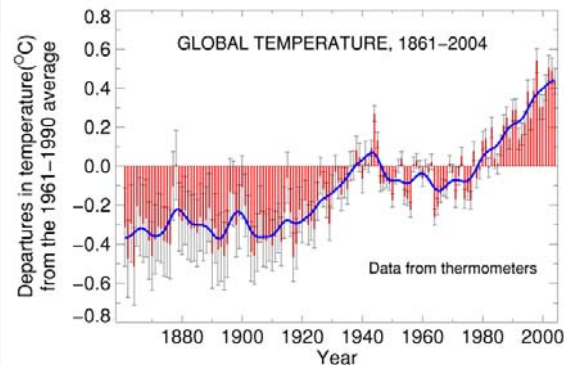
▶ Sustainable development

- This is development taking into account economic, environmental and social aspects.
- Local authorities have role in encouraging more sustainable development in their areas.

Background

Climate change

- Is the result of the release of man-made greenhouse gas emissions into the atmosphere.
- The main greenhouse gas is carbon dioxide (CO₂).
- The main source of CO₂ is from burning fossil fuels such as coal, gas and oil.



Source: Hadley Centre



Project introduction



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Aim: to demonstrate and promote the savings available from the use of intelligent metering and training occupants in public buildings and to show that these savings can be achieved at little, or no, additional cost.

Objectives: to maximise the energy savings available across Europe through the use of intelligent metering and behavioural changes of building occupants.

Partners:

Austria: Energieagentur Waldviertel, Sonnenplatz
Großschönau GmbH

Denmark: County of South Jutland, Esbensen

Germany: ENERGIE2000

UK: IT Power, Leicester City Council

What is Intelligent Metering?

Intelligent
Metering

Meters



Data Bird
Local Logger



Radio
Antenna



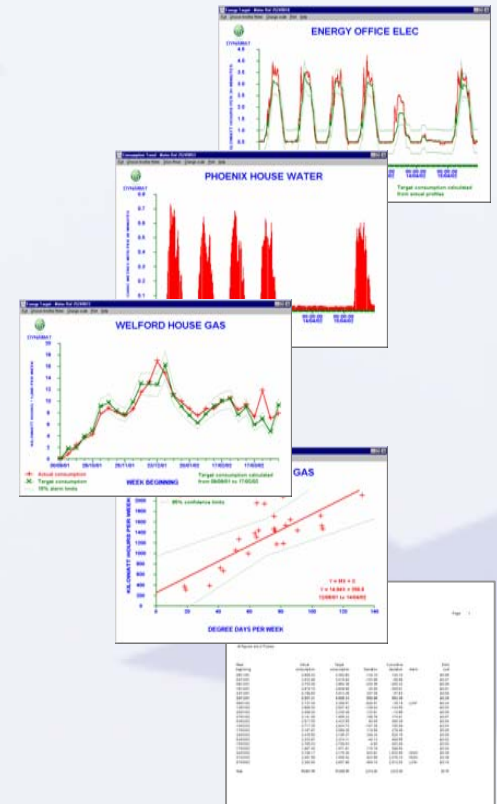
Computer



Modem

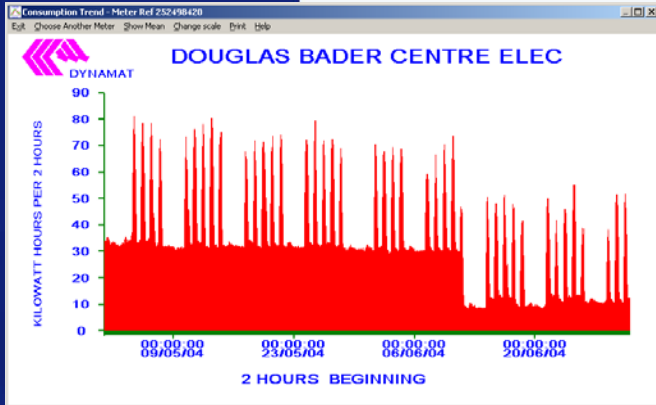


Central Receiver /
Data Logger



Overview

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Intelligent metering analyses half hourly monitored data to identify activities to change the behaviour of building owners and tenants resulting in energy and water savings.

▶ In this project, local authority buildings including offices, schools, sports/leisure facilities and community centres are monitoring energy and water use. This data is being processed to identify actions and associated savings. Training is being provided to the building users.

▶ Lessons from the approach will be learnt.



What are the benefits?



Financial savings

- Better energy management leads to cost savings



Better comfort

- Possible to improve comfort levels in your buildings



Educational benefits

- Education benefits from learning about energy and sustainability for schools taking part in the project



Staff development

- Training on energy saving and use of Learning for Sustainability can be used for staff development



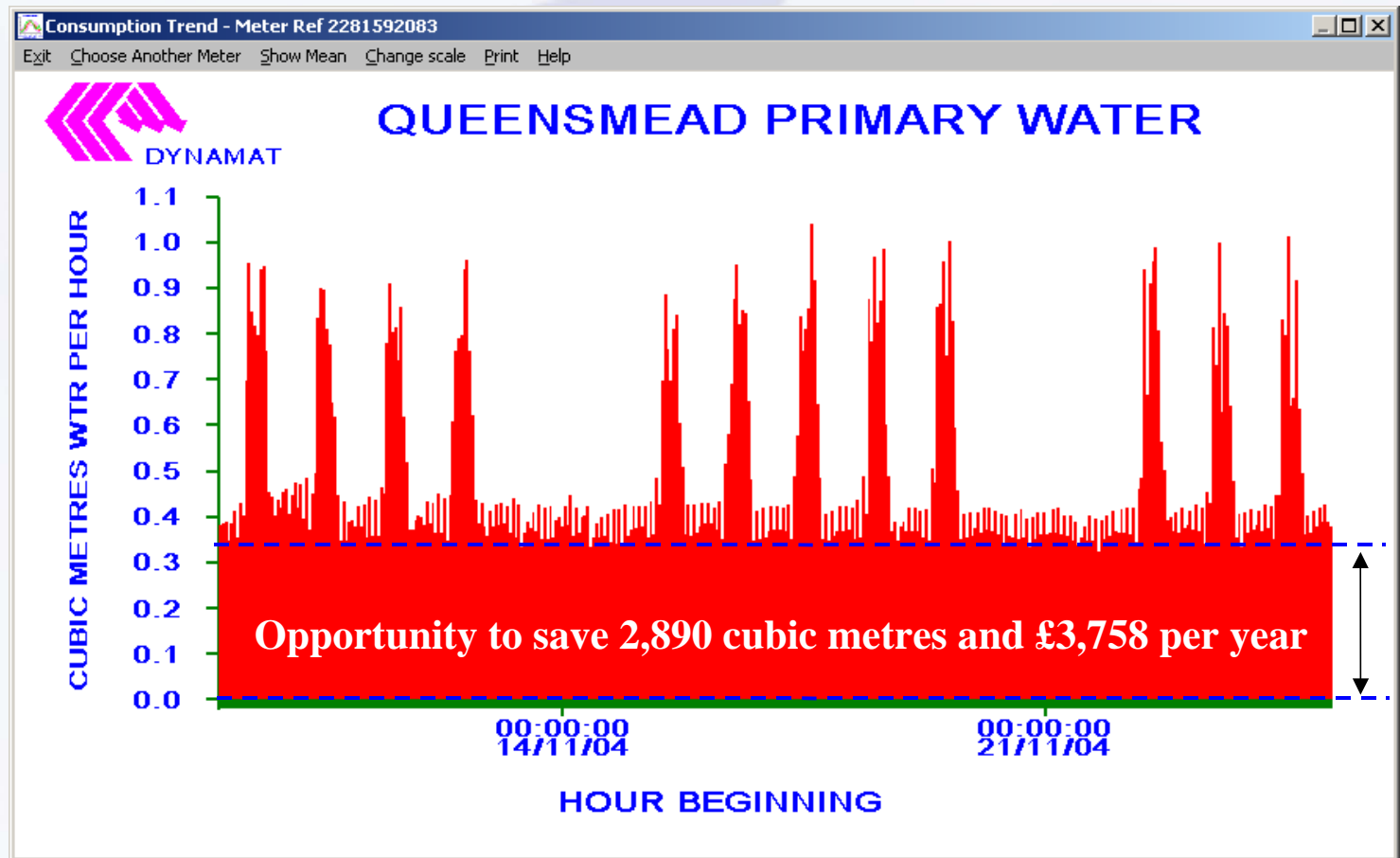
Environmental benefits

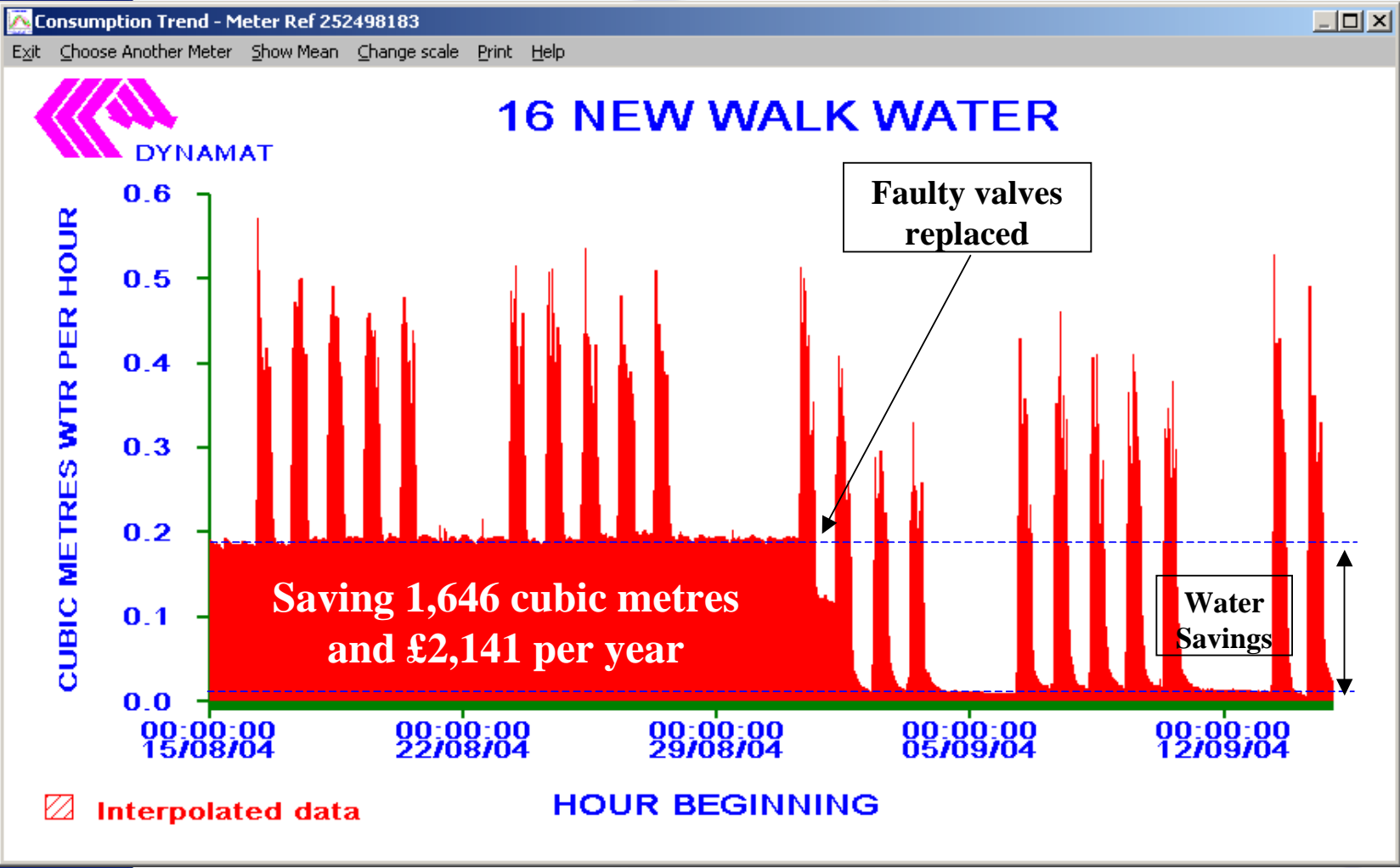
- Savings in energy use and related emissions

What does monitoring energy and water show?

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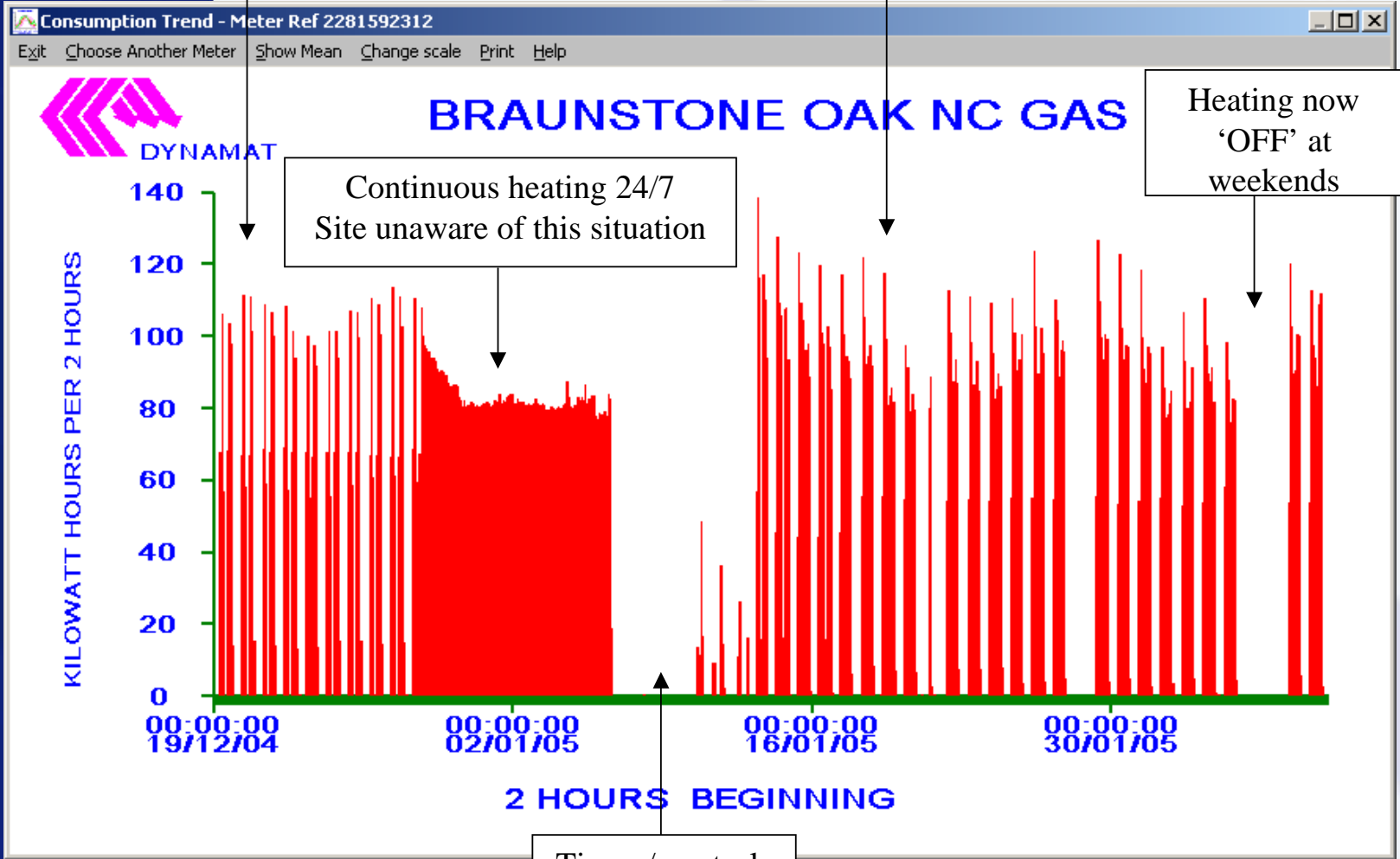
Monitoring Water



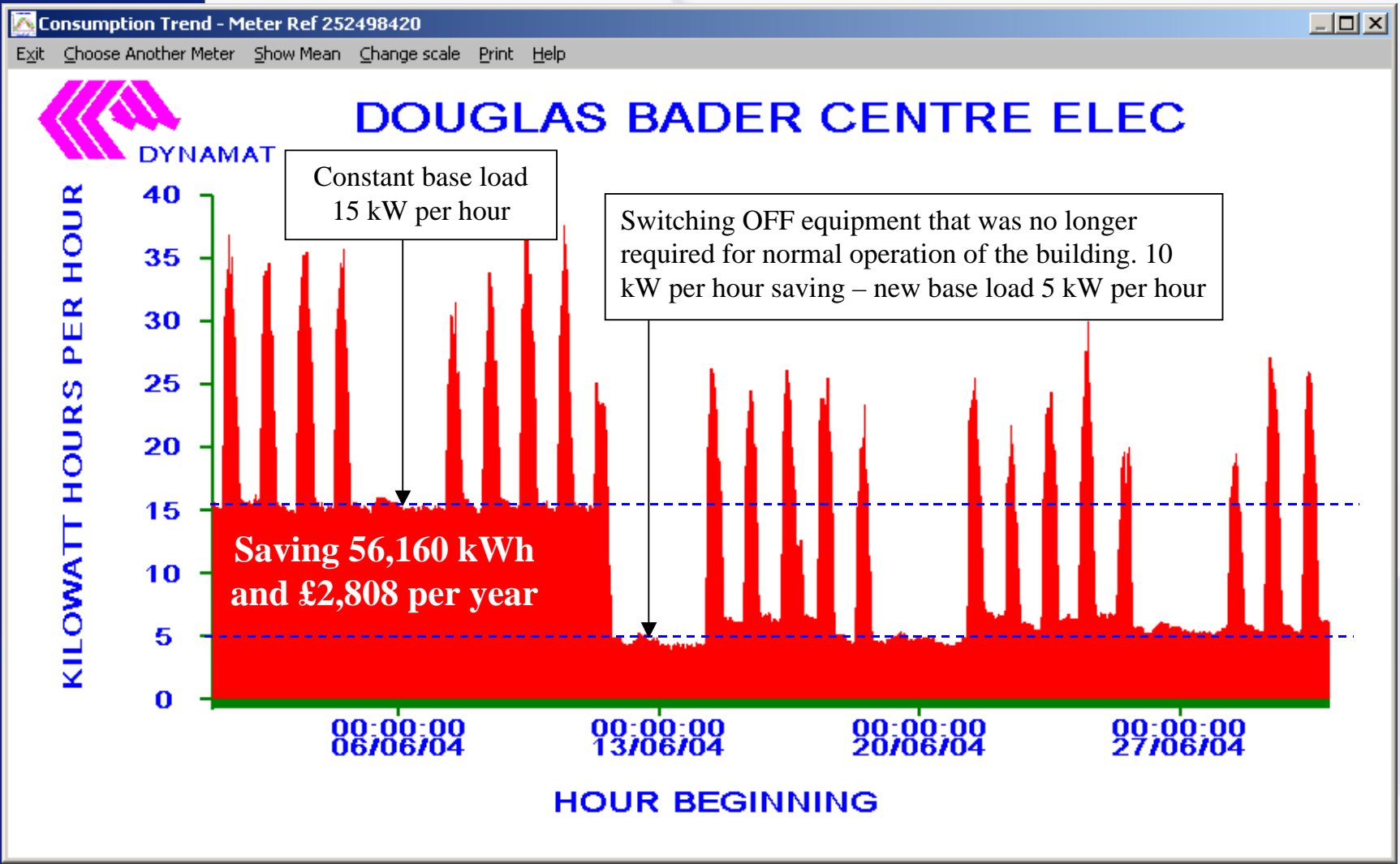


Heating Operational 7 days a week
Building occupied 5 days a week

New timer installed
Still operating 7 days a week



Timer / controls failed



What do we know about energy in your buildings?

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- ▶ **Energy consumption, cost and carbon dioxide emissions for your building**
 - *E.g. Can add chart or table showing energy consumption, cost, and emissions for buildings*
- ▶ **Estimates of possible savings**
 - *Can list possible savings identified for buildings*
 - *e.g. switching off unnecessary equipment ? €/year, etc.*
- ▶ **Consumption graphs for building**
 - *E.g. Can include example intelligent metering graphs for buildings*



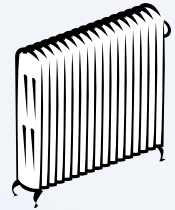
What can you do?



Information from best practice guide / good housekeeping guide

E.g.

- check temperature/heating control settings
- switch off lights and equipment at end of day
- consider water saving opportunities



Energy managers guide information

- E.g. energy management matrix



Examples of energy savings from different actions

- E.g. Switching off lights in an office overnight can save enough energy to make 1000 cups of tea

What is the training?

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▶ Launch

▶ Individual meetings/discussions

- to discuss the training suitable for your building

▶ Training delivered for building users

▶ Posters

- Selection of posters for use in your building



- can give details of the training you are doing in your buildings

When is this happening?

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Time plan of activities

▶ Launch – April

▶ Individual meetings – April/May

▶ Training users of your building – May onwards

▶ Setting up posters – April

- can give details for your training

Contact details

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▶ Further information / Comments/ Energy saving suggestions:

▶ *Contact name:*

▶ *Address:*

▶ *Tel.:*

▶ *Email:*

▶ *Web: www.intelmeter.com*

- *can include your contact details*