

HOLYROOD PALACE GOING GREEN

DR MAIRI DAVIES



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Climate Change (Scotland) Act 2009

At least 80% cuts of all greenhouse gases (on 1990 levels) by 2050;

A 2020 target of at least 42% reduction in greenhouse gases (29.9% reduction reached between 1990 and 2012)

Renewable sources to meet 100% of Scotland's electricity demand by 2020 (progress at 2013/14 is 46.5%)

A strong duty on all public bodies to make a full contribution to tackling climate change



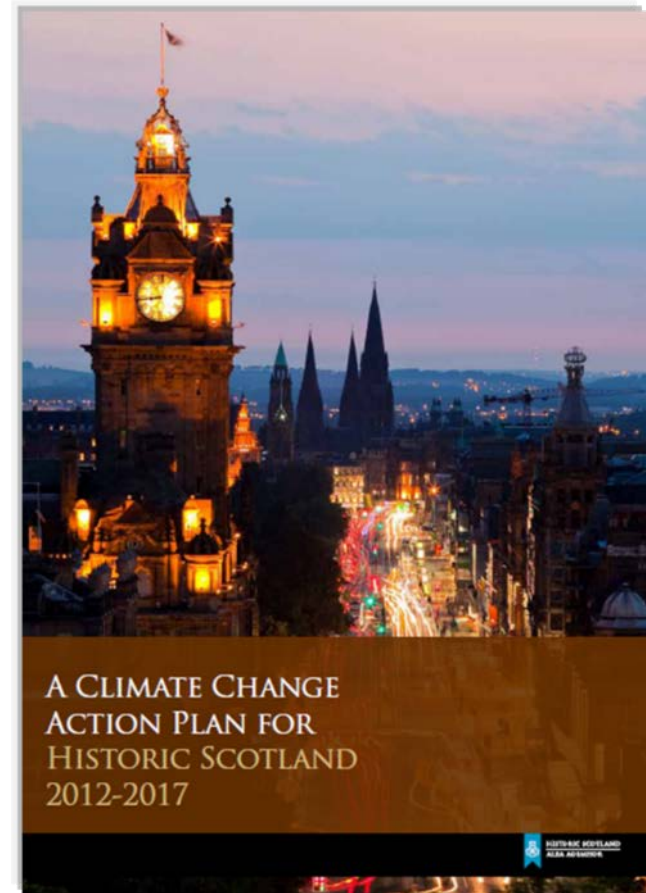
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CLIMATE CHANGE ACTION PLAN

2012-2017

- Reducing energy use in our buildings
- Improving our operations
- Improving energy efficiency in traditional buildings
- Building resilience: preparing the historic environment for climate change
- Improving sustainability
- Developing and promoting sustainable tourism
- Informing and influencing others



OUR APPROACH TO CARBON MANAGEMENT...

1 Reduce energy consumption

Measuring & monitoring; automated metering; staff training & behaviour change; systems controls etc.

2 Retrofit buildings to improve energy efficiency

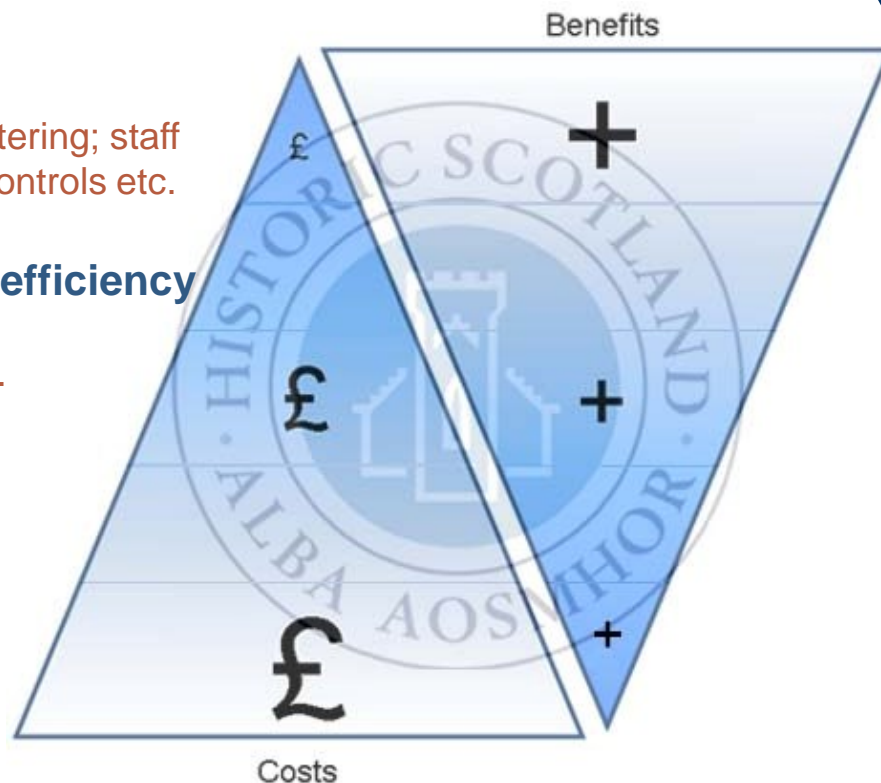
Insulation, improved lighting & heating, secondary glazing, draught proofing etc.

3 Diversify energy supply

Install renewables at appropriate sites

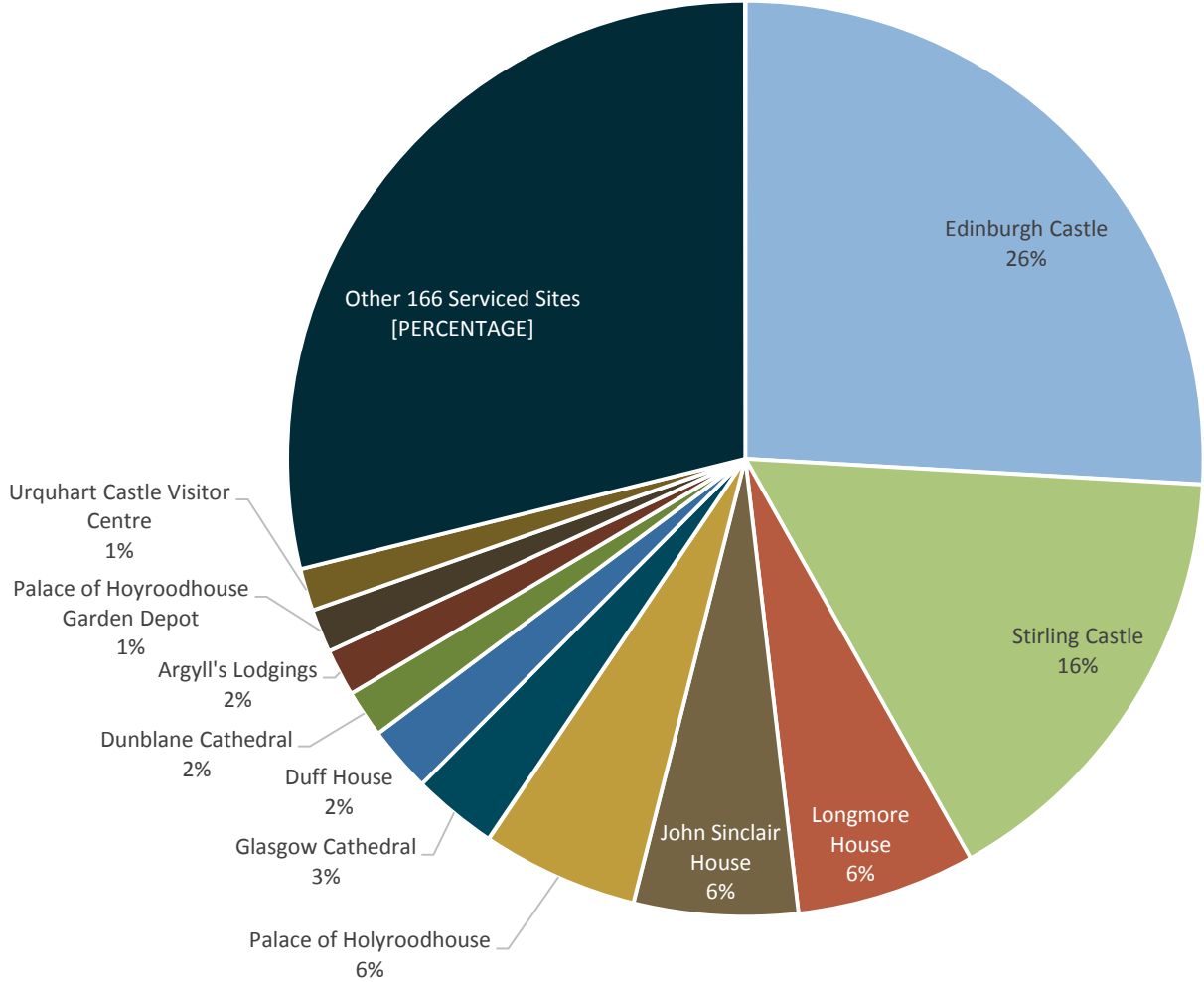
4 Organisational change

Policy & operations e.g. procurement, property management & construction



HES ESTATE

BUILDING EMISSIONS BREAKDOWN



WHAT HAVE WE ACHIEVED?

NOTABLE SITES FOR REDUCTIONS



Edinburgh Castle



Holyrood Palace



Glasgow Cathedral



Duff House



Longmore House

- Would like to achieve this in other sites....

REDUCING ENERGY

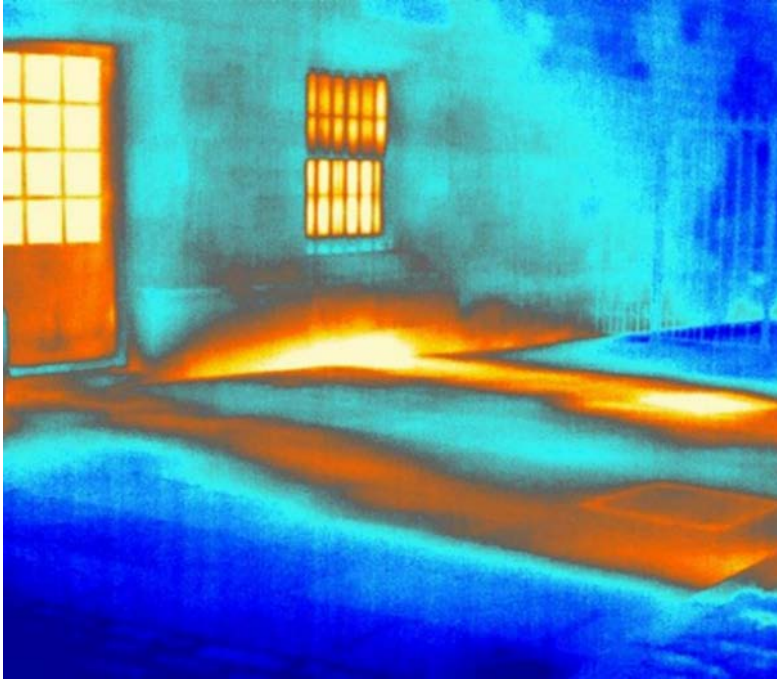
PALACE OF HOLYROODHOUSE

- 3rd largest energy user in HES estate (was 2nd), contributes c.6% of carbon footprint
- Key players – Historic Environment Scotland, Royal Household and Royal Collection Trust
- Gas and electricity bills c.£61k/annum, (was £122k in 2008/9)
- Split 50/50 between HES and Royal Household Palace occupied exclusively by the Royal Household; maintenance works and investments by HES
- Royal Collection Trust operate it as a paying visitor attraction
- The Palace is Her Majesty's official residence in Scotland (royal residences are exempt from displaying an Energy Performance Certificate)



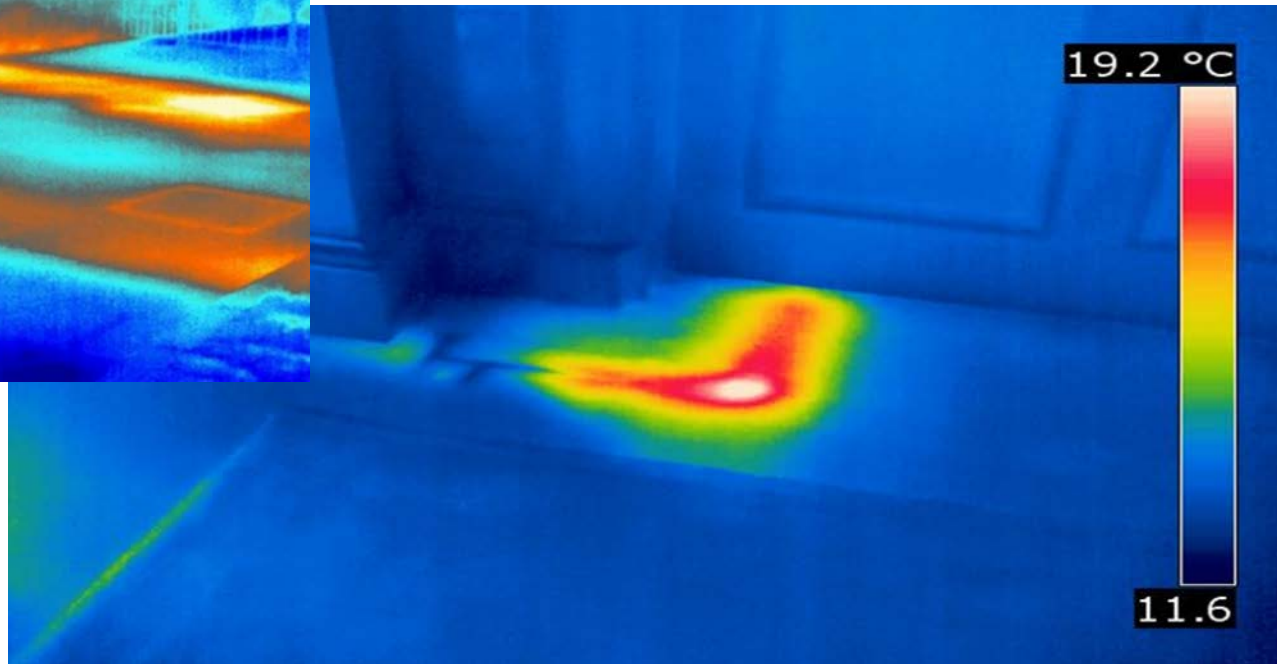
PALACE OF HOLYROODHOUSE

THERMAL IMAGING



Uninsulated and corroded pipework from external boiler house leading into the Palace

Unlocated and uninsulated sections of internal pipework



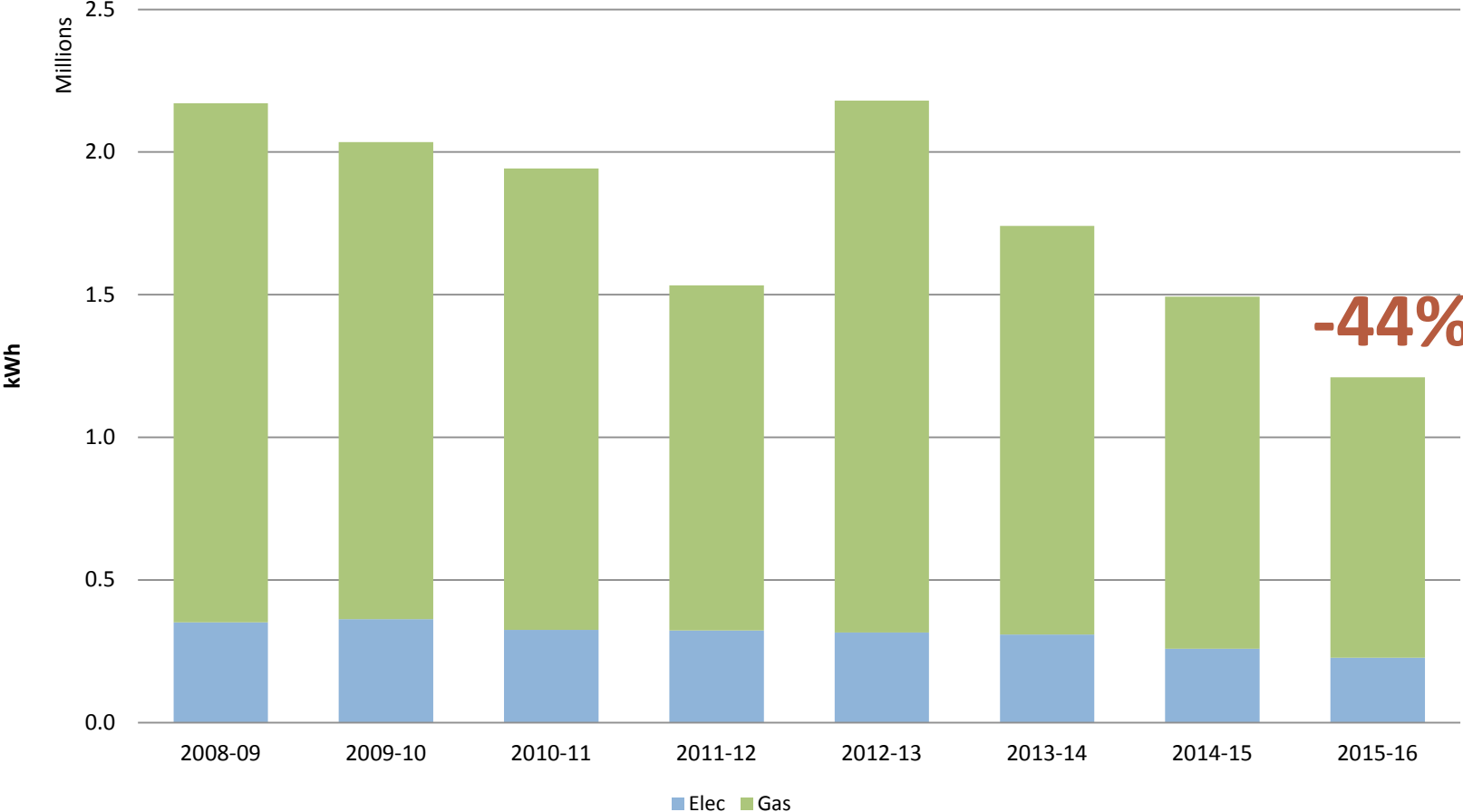
SHEEP'S WOOL INSULATION



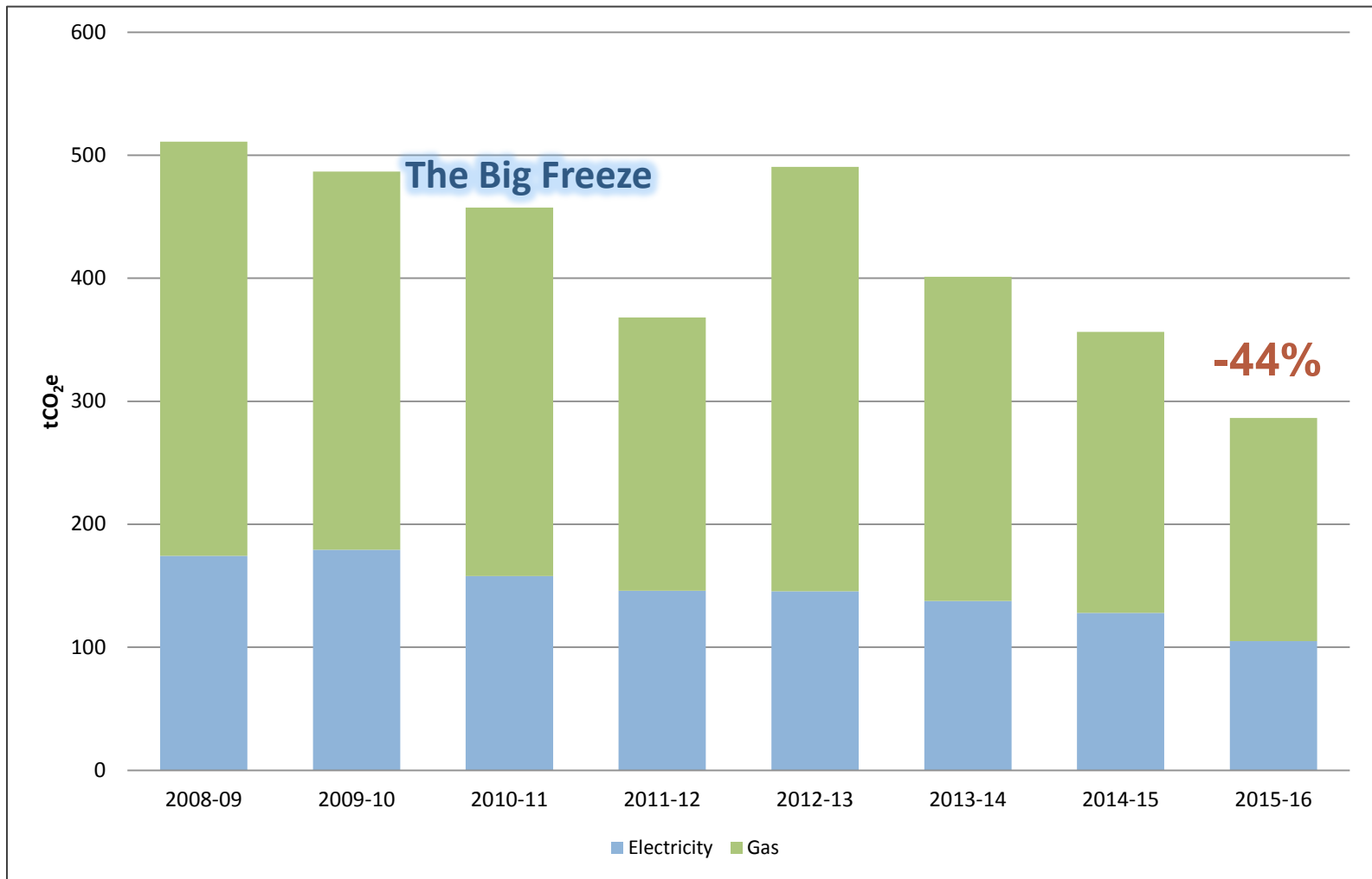
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PALACE OF HOLYROOD HOUSE - ENERGY



PALACE OF HOLYROODHOUSE - EMISSIONS



...MORE BEHAVIOURAL CHANGE!



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