



Brite Green carbon performance report: methodology update

9 June 2015, 12:00-13:00

Speakers:

Iain Patton, CEO, EAUC (Chair)

Darren Chadwick, Managing Partner, Brite Green Ltd

Jonathan Mills, Carbon, Environment & Sustainability Manager,
Lancaster University

Graham Barton, Director of Estates, Royal Agricultural University



Brite Green carbon performance report:
Summary of findings & methodology update
June 2015

BriteGreen
Sustainable Strategy



Webinar objectives

This webinar has three key objectives:

1

Summarise the report's main findings

Explore the key emissions trends and the challenges Universities face in achieving carbon reductions.

2

Case studies

Showcase the experience of Lancaster University and Royal Agricultural University in their carbon management journeys.

3

Present the updated methodology for future reporting

Outline the methodology for the 2013/14 Brite Green carbon analysis.

About Brite Green

Brite Green is an award winning sustainability consultancy. We help organisations understand how and why sustainability is important to them and then implement effective solutions to deliver improved commercial and sustainability performance.

We have significant experience working with universities on carbon and general environmental management and provide services in four main areas:

BRITE GREEN:
AWARD WINNING
SUSTAINABILITY
CONSULTANCY



SUSTAINABILITY STRATEGY

Deliver enhanced business performance through sustainability.



MANAGEMENT SYSTEMS

Implement effective environmental and CSR management processes



IMPLEMENT SOLUTIONS

Implement technology and process solutions to improve sustainability performance



SUSTAINABILITY REPORTING

Engage with your stakeholders with effective sustainability and ESG reporting.



Carbon management services

We offer a range of services to support universities and colleges to monitor, manage and reduce their energy use and carbon emissions.

Energy and carbon data assessment

Understand the quality and reliability of your energy and carbon data with a detailed review of the collection processes, data completeness and granularity, and calculation methodologies.

Review your carbon performance to date

Understand your emissions performance to date against targets and expected reductions from abatement projects, and identify any barriers or challenges that have prevented abatement initiatives so far.

Assess performance against 2020 target

Check whether your carbon management plan is on track to achieve your 2020 targets by modelling future energy trends, taking into account any changes in student and staff numbers, new buildings or energy using equipment, and planned abatement initiatives.

Energy audit, including ESOS

Get a clear picture of where and when energy is being used and identify target areas for improved efficiency. Energy audits are needed by any institutions required to comply with ESOS regulations.

Technology review

Review the cost and technical feasibility of abatement technologies and initiatives available and prioritise based on their cost effectiveness of the carbon savings offered. Analyse space use within the estate and assess the options to improve utilisation rates.

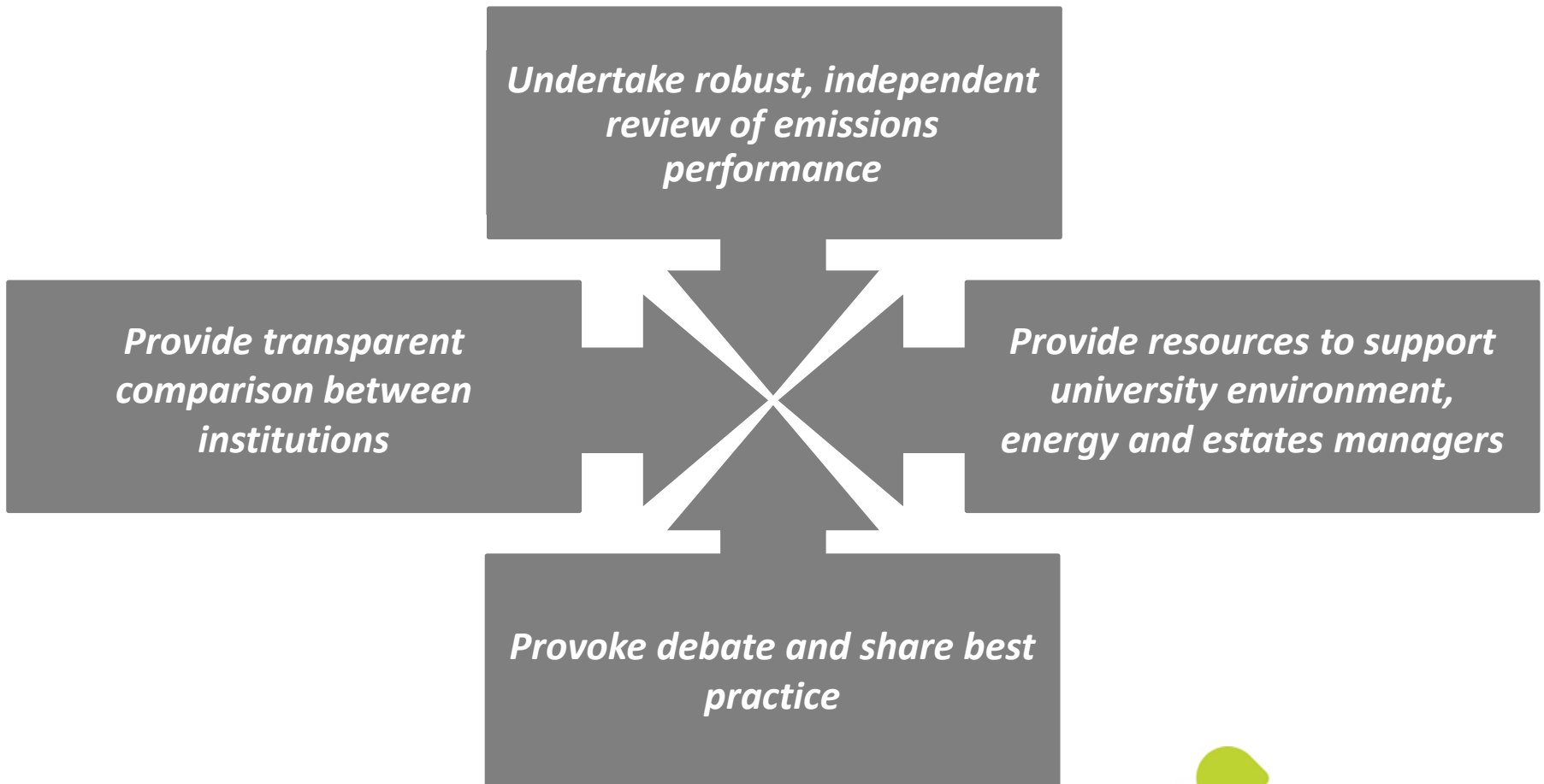
Update carbon management plan

Update your carbon management plan to ensure it is best able to deliver your carbon reduction target and ensure that it aligns with your commercial and estates strategies.

Overview of report findings

Report objectives

The higher education carbon performance report set out to provide robust, independent review of carbon emissions in the sector and provide resources to support university managers.



Methodology for April 2015 report

The report methodology focused on evaluating absolute carbon reductions in the sector to reflect HEFCE's 2020 absolute reduction target.

Review historic emissions data

Brite Green analysed historical emissions data for all HEFCE universities for the period 2008/09 to 2012/13 and determined emissions trends for each individual HEI and the sector in total.

Data: baselines and targets from HEFCE, performance over time from HESA

The emissions data used in this analysis was sourced from the 2013/14 Higher Education Statistics Agency (HESA) estates management record and the HEI carbon baselines and targets to 2020 were provided by HEFCE.

Forecast emissions based on reduction rates

A forecast of future emissions was calculated for each HEI based on the carbon emission trends between 2008 and 2013, and a sector forecast calculated based on the aggregate forecasted emissions from all universities each year.

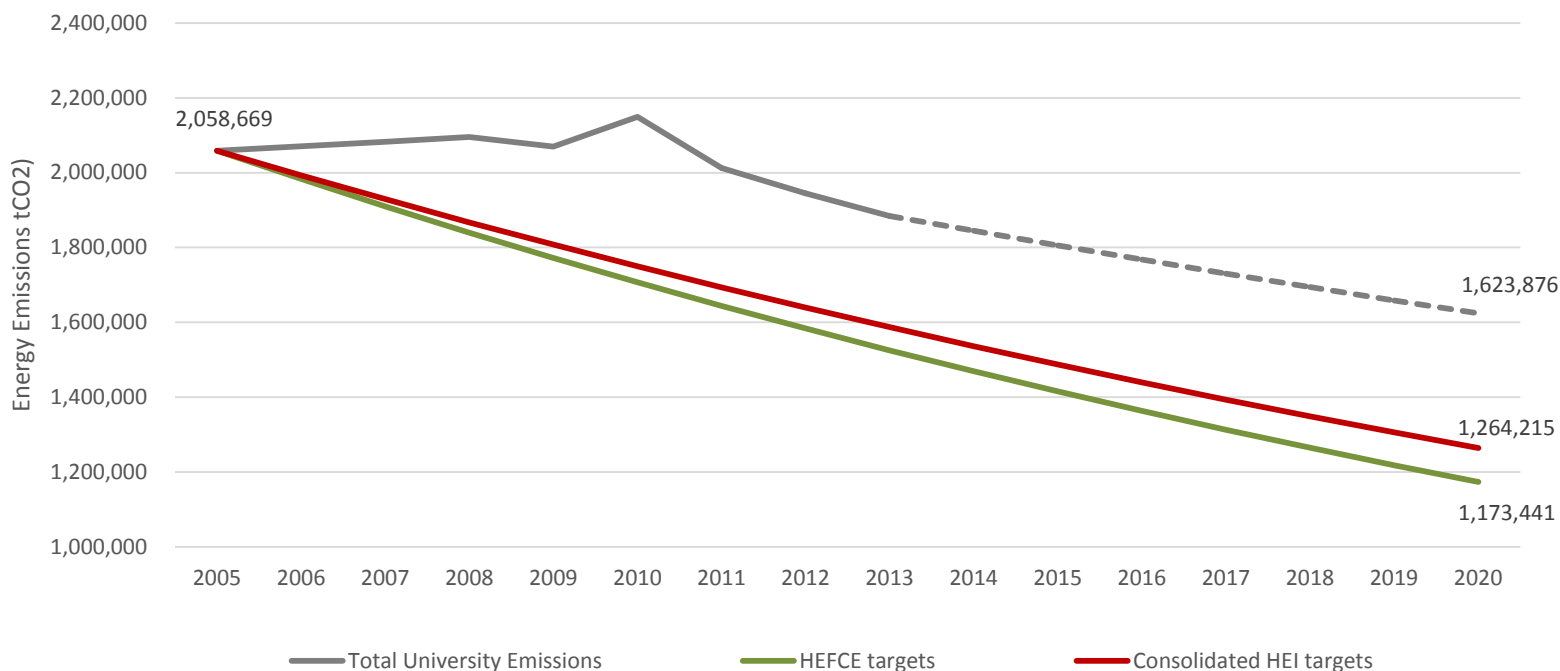
Calculate sector reduction objectives from institution targets

The collective university reduction target of 38% was determined by aggregating all universities' expected emissions reductions in 2020. These estimations are in line with HEFCE estimates for collective university reduction

Higher education carbon emissions

In 2011 HEFCE set out an absolute carbon reduction target of 43% for the higher education sector and requested universities and colleges produce targets and carbon management plans. Our review of progress to date identified that whilst many institutions have delivered reductions, the sector as a whole is not on track to achieve the target.

University Emissions and Targets



Key findings

The main findings from the review of emissions from 2005 to 2012/13 were as follows:

Key trends

- *The sectors has reduced emissions by 8.5% between 2005 to 2012/13*
- *The forecast for sector emissions reductions by 2020 around 21%; half of the HEFCE target of 43%*
- *Emissions reductions achieved vary widely between institutions*
- *Some universities have made significant reductions to date*
- *Many more are behind track, with 39 out of 126 increasing emissions*

Key challenges

- *Carbon management plans may have overestimated achievable reduction opportunities*
- *Commercial growth (including student numbers and estates area) has driven emissions growth or reversed reductions that have been achieved*
- *Estates and commercial plans are often not well aligned with carbon strategies*
- *Data quality varies between institutions*

Report recommendations

The report made 5 recommendations for universities and colleges:

1

Review emissions performance to date

Review energy use and emissions reductions to date and assess how effective the initiatives that have been implemented have been. Have they achieved the expected reductions?

2

Review success of CMP implementation

Review how successful the carbon management plan implementation has been including why any initiatives failed or were not implemented.

3

Check alignment of CMP with commercial strategy

Assess whether your plan is aligned with your commercial strategy, taking into account expected growth in student numbers and property footprint.

4

Check for new reduction opportunities

Review any new carbon reduction opportunities.

5

Update your CMP

Update your carbon management plan incorporating lessons learned and any new abatement opportunities, and reforecast emissions profile out to 2020.

Report feedback

The report has stimulated significant discussion and debate across the higher education sector. Some of the key areas of feedback we've had include:

- **Which are better for the sector - absolute versus relative targets:** intensity targets take factors such as university growth into account compared to absolute targets, which better reflect the nature of the carbon reduction challenge we face.
- **The disconnect between university carbon and commercial strategies:** Many universities currently struggle to decouple commercial growth from carbon emissions.
- **What data should be used?** Both HEFCE and HESA data was used in the reporting to date – which data best supports transparent and robust analysis?
- **The accuracy of publicly available EMR and institutional target data:** Feedback has highlighted discrepancies in publically available HEFCE and HESA data.
- **Full performance list or just top performers:** What's the best way to communicate performance of institutions in the future?

Case studies from universities

Lancaster University



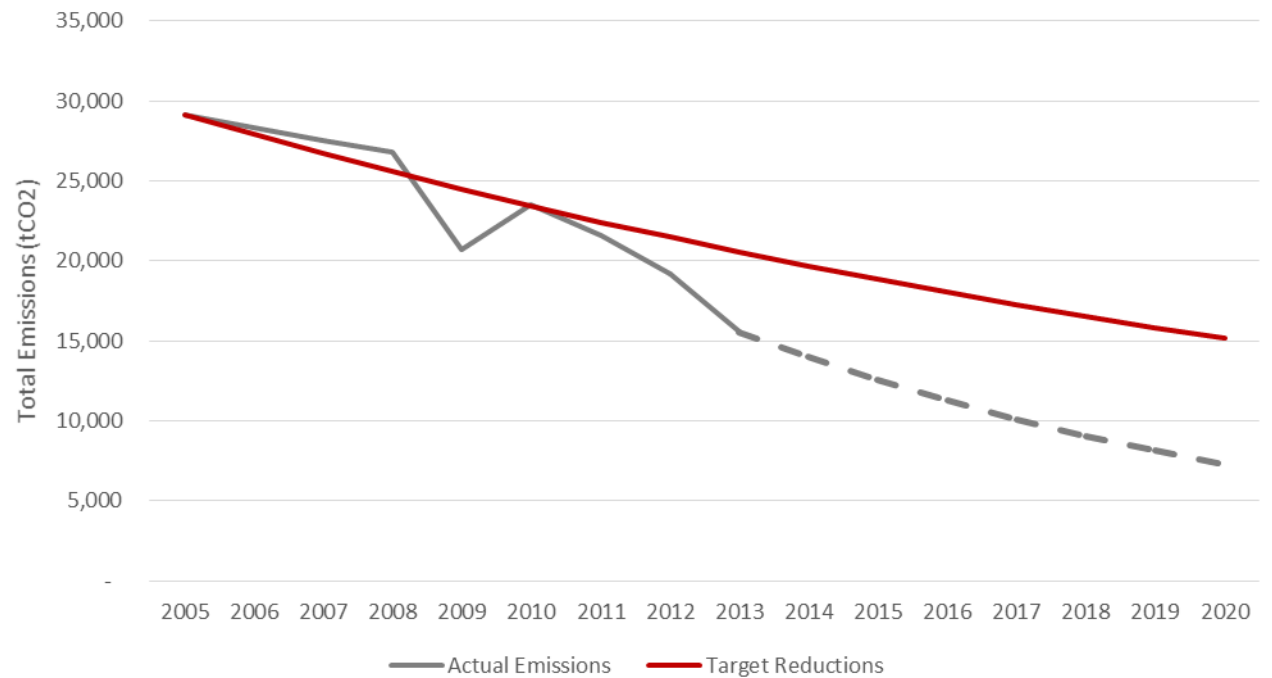
Jonathan Mills
Carbon, environment & sustainability manager

Links and resources

- [Carbon management plan](#)
- [Sustainability website](#)
- [Environmental management website](#)

Carbon reduction target (%)	Total Emissions (tCO ₂ e)							% change from 2005 to 2013
	2005 baseline	2008 baseline	2008/09	2009/10	2010/11	2011/12	2012/13 (tCO ₂ e)	
48	29,131	26,781	20,697	23,504	21,603	19,200	15,572	-47%

Actual emissions versus target reductions



Royal Agricultural University



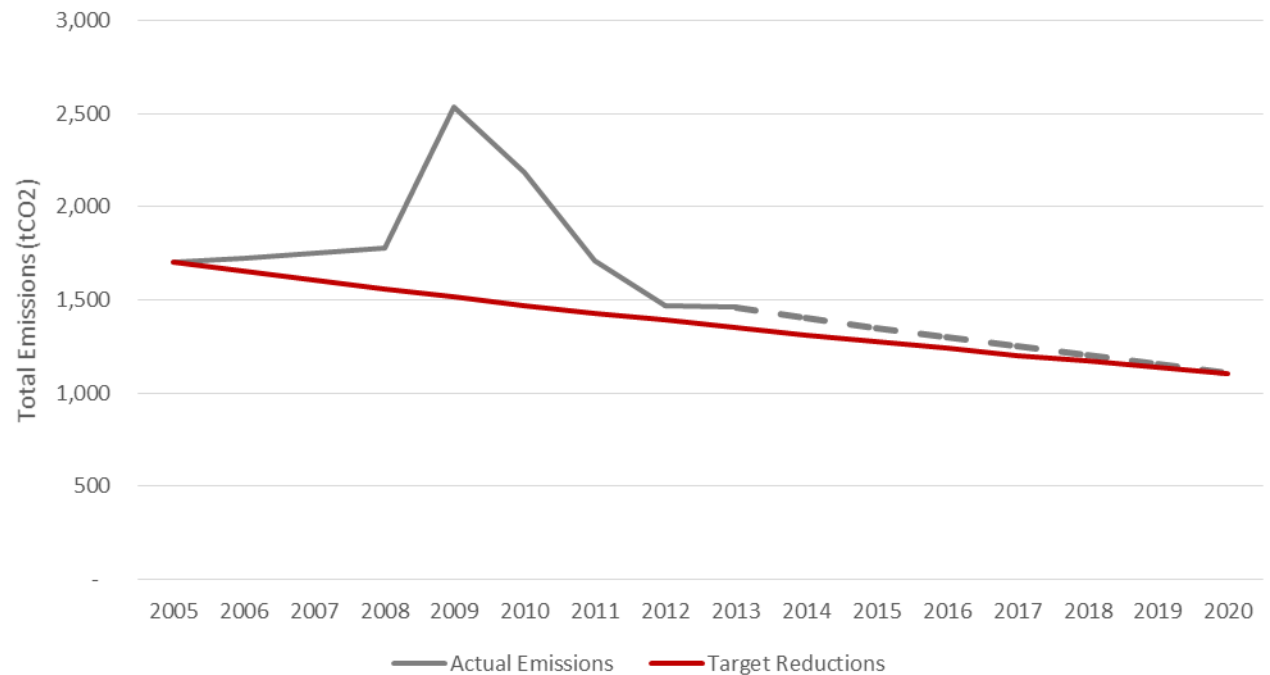
Graham Barton
Director of Estates

Links and resources

- [Carbon management plan](#)
- [Energy & carbon website](#)
- [Sustainability website](#)

Carbon reduction target (%)	Total Emissions (tCO ₂)							% change from 2005 to 2013
	2005 baseline	2008 baseline	2008/09	2009/10	2010/11	2011/12	2012/13 (tCO ₂ e)	
35	1,700	1,778	2,534	2,184	1,710	1,469	1,462	-14%

Actual emissions versus target reductions



Questions for Jonathan and Graham

Revised carbon analysis methodology

Revision objectives

Following feedback from universities and colleges on the 2012/13 report, the process for future reports has been revised with three key objectives:

Improve data quality and reliability

Respond to feedback from sector

Ensure methodology aligns with sector and national objectives

Revised analysis methodology

Data

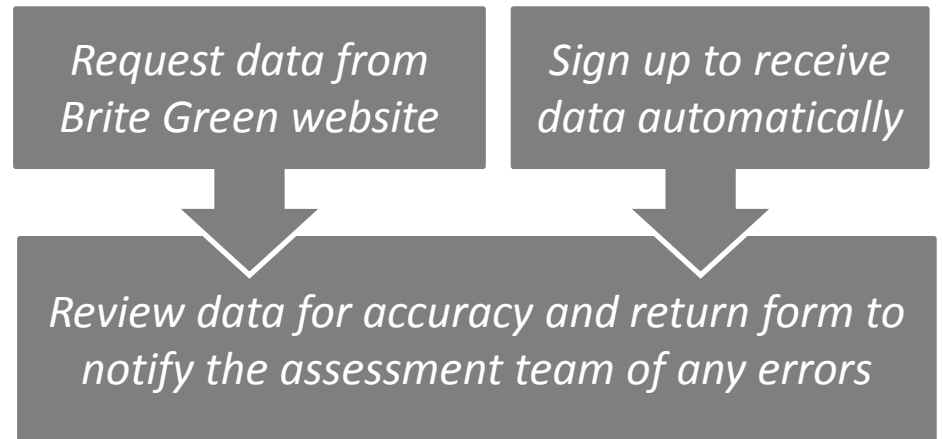
A number of issues were identified in the HESA and HEFCE data in the 2012/13 analysis and subsequent reviews of the 2013/14 data.

We will therefore make the data for each institution available for review before our 2013/14 analysis to pick up any discrepancies in the historic emissions or targets.

Data to be used:

- *HESA 2005 baseline from 2013/14 EMR*
- *HESA reduction targets from 2013/14 EMR*

[Click here to request data](#)



Revised analysis methodology

Analysis

Emissions reductions analysis for individual institutions and the sector will remain mostly unchanged from the 2013/14 review with the follow assessments completed:

	<i>Individual institutions</i>	<i>Sector</i>
<i>Total percentage reductions from baseline to date</i>	✓	✓
<i>Year on year change</i>	✓	✓
<i>Percentage of 2020 target completed</i>	✓	✓
<i>Projection of emissions out to 2020</i>	✓	✓

Revised analysis methodology

Report and league table

As for 2012/13, a sector report and league table will be produced for 2013/14. The report will outline the key historic trends and forecast sector emissions out to 2020 based on reduction rates to date. A league table of percentage reduction from baseline will be published, supported by an analysis of institutions progress against their own 2020 target.

Reports of each institution will also be produced outlining performance to date, forecast reductions out to 2020 and ranks in the league tables.

Sector report

- Trends 2005 – 2013/14
- Year on year change from 2012/13
- Forecast emissions out to 2020
- Top and bottom performers:
 - Total emissions reductions
 - Performance against target
 - Year on year change

League table

- Percentage emissions from 2005 baseline (absolute emissions reduction)
- The following will also be reviewed:
- Progress against 2020 target
 - Year on year change

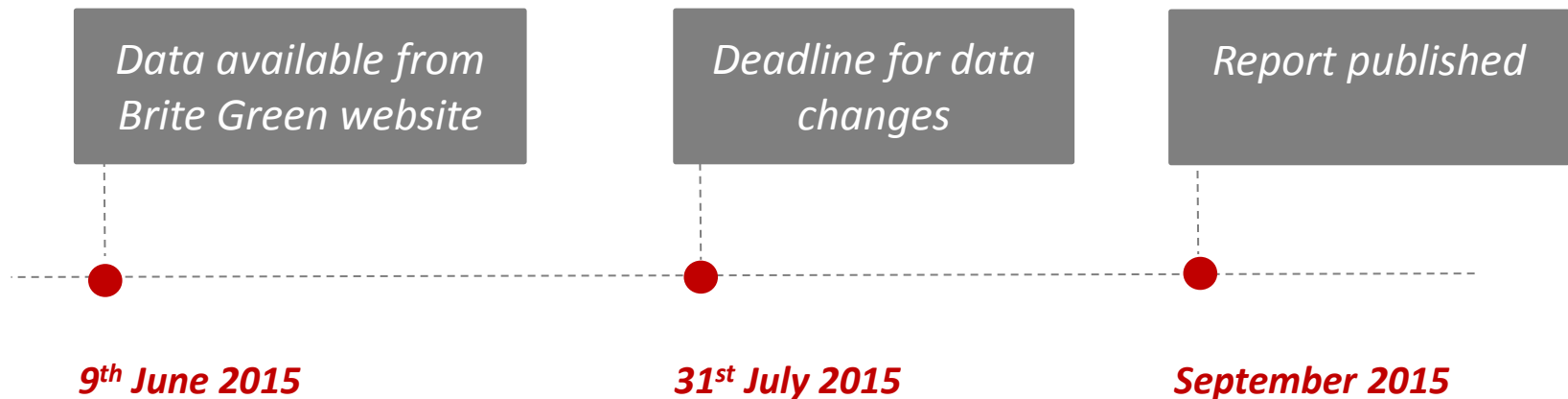
Institution report

- Trends 2005 – 2013/14
- Year on year change from 2012/13
- Forecast emissions out to 2020
- Performance ranks for:
 - Total emissions reductions
 - Performance against target
 - Year on year change

Revised analysis methodology

Key dates

The report and league table will be published in September 2015 with the following key milestones:





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Brite Green is an award winning sustainability strategy consultancy which specialises in delivering enhanced business value through improved sustainability performance. We have considerable experience in carbon and environmental management in Universities, including carbon management plan design and implementation.

www.brite-green.co.uk

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