HE Update

Sustainability and Climate Change in the HE Sector

April 2021

Background

In our opinion climate change presents the biggest single societal threat. This briefing note suggests how higher education can increase its sustainability.

Throughout the briefing, we use data from the HESA Estates Maintenance Record to illustrate the current sector position.

To briefly define some of the key terms used in this paper:

Kg/tC02e – Kilogrammes/Tonnes of Carbon Dioxide emitted – this is the total carbon dioxide emitted by the institution as a by-product of operations/energy consumption.

GIA – Gross Internal Area – the total internal floorspace of institutions' estates.

Scope 1 and 2 emissions – carbon emissions that are under direct control and ownership of the institution (e.g. those that arise from energy consumption in the University owned buildings).

Scope 3 emissions – externalities that occur along the University supply chain (e.g. student travel for open days).

Overview

Figure 1 shows total sector carbon emissions (tC02e), using the most recent Estates Maintenance Record (EMR). Scope 1 and 2 emissions (that universities control directly) are declining gradually. If the trend continues, the sector will reach net zero by 2049. The UK's national target is 2050.

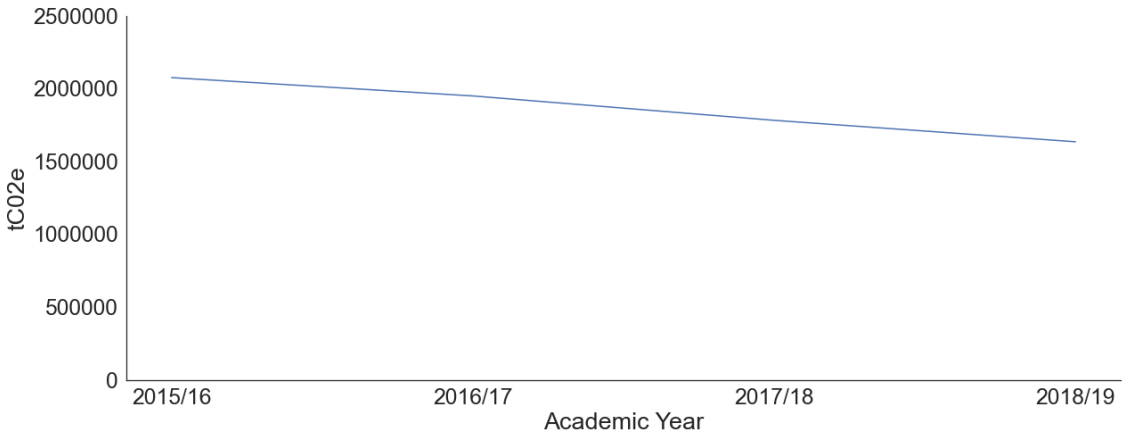

Figure 1

Scope 3 carbon emissions (indirect emissions occurring throughout the value chain - e.g. air travel from international students travelling for open days) must not be forgotten. These can be difficult to calculate, and even more difficult to reduce. It is also reasonable to assume that actions taken to

date represent 'low hanging fruit' in terms of decarbonisation (e.g. waste water heat capture, building more efficient buildings). Sustaining the current (just adequate) rate of progress may prove challenging and will prove more complex and expensive. Future measures will include the retrofit of carbon intensive buildings and the creation of low energy IT infrastructures.

Higher education remains reliant on fossil fuels. Figure 2 shows the main sources of carbon emissions across the sector. It should be noted that the decline in emissions from grid electricity is most likely down to a joint effort between the University sector and electricity suppliers to reduce emissions (we'd suspect the majority of the reduction coming from the latter). Gas usage needs to be reduced, and electricity and water sourced from clean, renewable sources. The clear downward trend in emissions from grid electricity may be reflective of ongoing improvements in the use of renewable energy to source this.

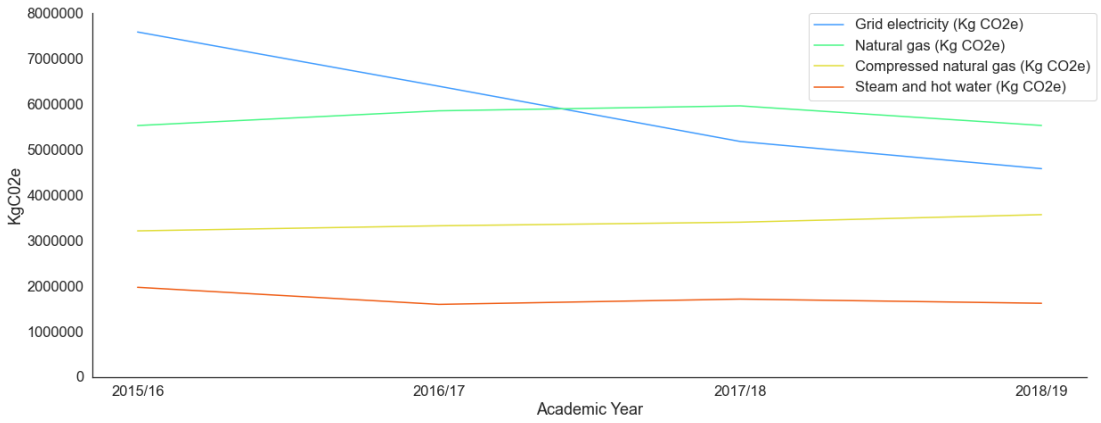

Figure 2

Regulation

The Department for Business, Energy and Industrial Strategy is responsible for strategic oversight of the UK's international climate and energy policy.[1] This is supported by additional policies and measures to support the drive to a low carbon economy. These are often developed at a sector level (e.g. OfCom's focus on creating a sustainable postal service in their 20/21 plan).[2]

Higher education has not enjoyed similar clear leadership in this area. The OfS published a proposal paper in January 2020 to define the action it would take to support sustainability in the sector.[3] Proposals included support for carbon reporting and decarbonisation projects, but the OfS envisaged that responsibility would rest principally with individual providers. A subsequent press release offered assurance that the OfS would not be silent: but so far that has proven to be their last word on the

[1] https://www.gov.uk/government/publications/the-uks-nationally-determined-contribution-communication-to-the-unfccc

[2] https://www.ofcom.org.uk/consultations-and-statements/category-2/plan-of-work-2020-21

[3] https://www.officeforstudents.org.uk/media/7199663b-5f6c-49f7-b231-ec5cab2adb81/bd-2020-january-71-reducing-higher-education-carbon-emissions.pdf

matter.[4] Support from the OfS to date has been limited and smaller providers may either not have the capacity to complete carbon reporting in adequate detail, or apply for decarbonisation funding. Figure 3 shows that smaller providers (with smaller estates) tend to be less carbon efficient. (figure 3 plots the density of results from providers across GIA and KgCO2e – the darker shaded areas indicate that there is a greater concentration of providers in that range of the chart).

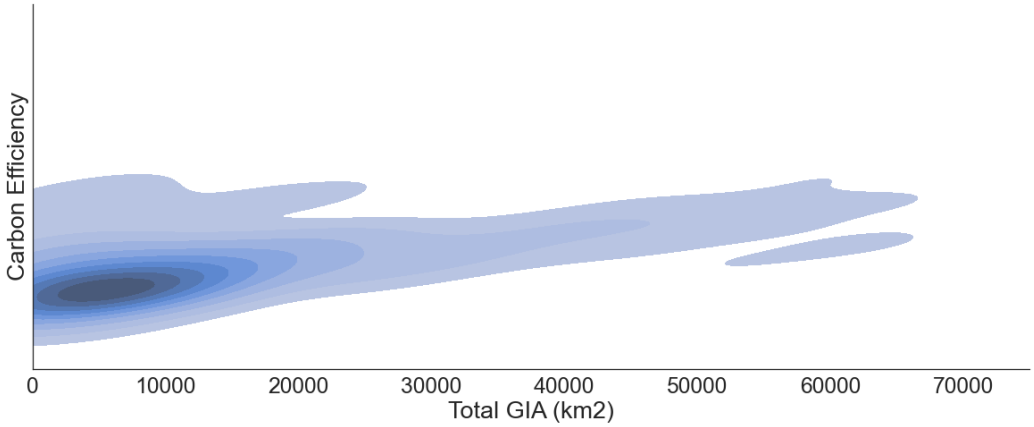

Figure 3

Of course, the primary focus of the OfS is to ensure students' interests are protected. This, combined with its emphasis on principles-based regulation, means it is unrealistic to rely on the OfS providing leadership for rapid positive action to improve sustainability. Declining public funding: both capital and revenue, removes another 'lever' that government could use to incentivise good sustainability practices within individual higher education providers. Government may influence behaviour through market-based instruments such as emissions trading schemes (ETS - whereby each organisation would get a carbon emission quota, and if they exceed this, could buy unused units off others). The UK has recently established an introductory ETS (managed by the Department for Environment, Food and Rural Affairs, though this currently only applies to energy intensive industries and aviation).[5] In the meantime, it seems that progress depends upon individual organisations (perhaps influenced by student and prospective student; research sponsor; local community and lender expectations) recognising and responding to the need for radical action and reconciling this with the impact upon their short term financial performance and growth (remembering that financial performance and strength are important indicators for the OfS). This is a tension that will need to be addressed if climate action is to be taken quickly enough.

Dominant sector narratives

All business sectors, including higher education, face the same challenge to reconcile required environmental and sustainability change with short- and medium-term financial pressures. Decarbonisation may require significant capital investment or fundamental re-evaluation of current

[4] https://www.officeforstudents.org.uk/news-blog-and-events/press-and-media/the-office-for-students-won-t-be-silent-on-sustainability/

[5] https://www.gov.uk/government/publications/participating-in-the-uk-ets/participating-in-the-uk-ets

practices. A reduced on-campus international student intake might improve environmental sustainability and credentials but at a risk of significant financial loss if those students cannot be persuaded that a remote experience is comparable.

Investment decisions and reviews of current business practices are all the more challenging given the financial pressures arising from the pandemic. That said, the pandemic has shown that accelerated and radical business change, on a scale that few would have predicted, is not impossible. Virtual and distance learning has costs, but opens the potential for increased recruitment. Staff and students don't always need to be physically present to be engaged. Sustainability may require universities to rethink current business models (which may or may not lead to a drop in income and altered patterns of expenditure). This could provide long term gains in financial and environmental resilience and security. Whilst organisations may want some breathing space after the pandemic, there is also an argument that the last year's disruption may have created a rare opportunity for longstanding business models and assumptions to be reviewed with a fresh perspective. Moreover, the goals of the Paris Agreement require urgent action.

Not acting now (despite the initial financial risk) will only compound future environmental impacts (e.g. food scarcity, increasing strain on urban infrastructures, rising sea levels), threatening the long term viability of the sector (and society) as a whole. Universities have historically been at the forefront of research and have pioneered societal transitions. Innovative sustainable strategies and technologies may also provide 'first mover' advantages, such as increased student and staff engagement/recruitment, or IP rights if sustainable technologies are developed in-house.

Increasingly, the need to act needs to be reflected and supported in risk registers and strategic plans, evidencing senior commitment (which is then acted on).

There is a growing school of thought, that some in the sector subscribe to, that it is too late for reform, and we now need to adapt to the probable climate catastrophe and economic collapse that will ensue. This has been labelled 'deep adaptation'.[6] Many adherents to this view emphasise the need for rapid action, though some take the more fatalistic view that it is too late to act and that mitigating actions are likely to prove futile. Universities need to now navigate a difficult field and rapidly formulate approaches that mitigate climate risk whilst attempting to maximise the benefit to cost ratio and manage other business risks that might arise from these changes. The University of Sydney has created a climate resilient infrastructure across its estate, with projects that focus on reducing environmental footprints, while employing regenerative strategies for energy and resource use.[7] Other Universities are also starting to look at restructuring their core offering and business model – adding more online and distance learning courses, that do not require estates and infrastructure that is as carbon intensive (e.g. the Purdue University/Kaplan partnership).[8] While ultimately driven by an interest to diversify income and strengthen financial resilience, new business models present significant opportunities for response to the climate risk that should be explored regardless of financial impact.

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[6] https://jembendell.com/category/deep-adaptation/

[7] https://www.sydney.edu.au/content/dam/corporate/documents/about-us/values-and-visions/sustainability/sustainability_strategy_2020.pdf

[8] https://www.forbes.com/sites/lucielapovsky/2018/02/06/the-changing-business-model-for-colleges-and-universities/?sh=479e0e545ed5

Non-regulatory support and partnerships

Significant reliance is being placed on individual higher education providers to formulate and implement significant changes in order to mitigate climate risk. Partnerships between organisations seem to offer the most opportunity for positive action[9]. Some universities have created their own climate emergency groups (co-ordinated by senior leadership, at varying levels of maturity) and have committed to decarbonisation plans. These are all positive actions, but when they foster rapid change and innovation that can be shared across higher education, their effect is compounded.

The Climate Commission for UK Higher and Further Education is a sector wide network that pulls together resource from Further and Higher Education to create an action plan in response to the UK's declared climate emergency. At the time of writing, 611 Higher and Further Education institutions are signed up, representing around eight million students. In February, the Commission launched its HEI Climate toolkit.[10] This offers a clear overview of the elements that are critical to sustainable action, with suggested steps and resources to inform direction.

There are other existing accreditation schemes institutions may subscribe to (EcoCampus, People and Planet, ISO14001). When choosing accreditation or frameworks to subscribe to, institutions should assure that these are challenging and appropriate. In figure 6, we provide a few initial thoughts on the positives and drawbacks of some of these. Any notable omissions or good practice from other existing frameworks should also be taken into account, despite any lack of formal requirement, to ensure complete coverage.

Accreditation/ Framework	Positive	Drawbacks	How extensive are the frameworks?
HE Climate Toolkit	A clear roadmap, details a range of achievable, sector specific actions that can be taken to co-ordinate and support sustainable approaches.	Suggestive only, no formal accreditation or compliance coming out of this, so is there an imperative to stick to this?	Heavily focused on climate risk. Could be supported by acknowledgement of other sustainability initiatives and goals, e.g. reducing inequality.
EcoCampus	Dedicated support and resource for further training and guidance for individual staff. Comes with dedicated software and E-learning, and also provides a transition to ISO14001.	Does a prescriptive framework leave room and resource for innovative action that might ultimately prove more radical?	The prescriptive framework might mean that responses become compartmentalised, where a holistic, interdisciplinary stance should be taken.

[9] https://www.mckinsey.com/business-functions/sustainability/our-insights/creating-partnerships-for-sustainability

[10] https://www.eauc.org.uk/climate_action_toolkit

People and Planet	Comprehensive and extensive, driven by student interest, and provides an overview of sector position.	Some questions raised over the methodology for rankings, and collection of information.	As with the HE climate toolkit, this is heavily focused on climate risk, and steps that are being taken to reduce waste/emissions.
Times Higher Education Global Impact Rankings	Scope isn't limited to climate action, but looks at all the UN Sustainable development goals, ensuring broader coverage.	The methodology in places is academic, and focused on institution output, rather than how they conduct themselves sustainably (not that this is a bad thing, in some other areas this is an oversight).	The scope of the impact rankings may mean that institutions don't divert sufficient action to rethinking business model/actions that could be taken to improve operational sustainability.
Sustainability Leadership Scorecard	Useful for gap identification, where are the institutions strengths and weaknesses in taking a stance?	Having dedicated resource to implement recommendations from the scorecard requires senior leadership, which is one of the criteria, is there too much circularity?	Provides a good base to start sustainable action, and a good grounding across all operations to build on.
ISO14001	Independent, internationally recognised standard.	Requirements are fairly easy to meet with little action, can this be used to greenwash and cannibalise institution's green ambition?	ISO audits are process focused rather than results. This means they can be achieved relatively independent of results.

Figure 4

From our point of view, the Sustainability Leadership Scorecard and HE Climate toolkit offer the best starting point, considering their flexibility and relevance to the sector. These should be supported by good performance (where possible) in the Times Higher impact rankings, and filling in any gaps in the frameworks with useful sections from other areas. ISO14001 may leave institutions particularly open to claims of greenwashing, as its easy to achieve with relatively few tangible results. To show sincere action, providers need to go beyond the requirements of simply meeting frameworks or gaining accreditation.

For any accreditation/framework system put in place, institutions need to respond with rapid action that meets the requirements of the system, but also challenges and goes beyond. Otherwise, there may be questions around the legitimacy of the actions taken, with possible accusations of greenwashing. Institutions should use these schemes as a base to focus their sustainable direction

and ensure a baseline level of action, taking further steps to support the approach and enhance the overall sustainable ambition.

Building a Bigger Tent

Estates departments influence their organisations' sustainability significantly: but universities' senior leaders need to front an interdisciplinary approach that engages academic departments and professional services alike. Everyone must play their part so that wider themes such as internationalisation and investment policies are drawn in. Sustainability messaging that wins hearts and minds is vital.

Climate debates are often polarised by two extremes – climate advocates and those who actively promote sustainability, or climate sceptics and those who downplay the risk. Most people, currently, occupy the middle ground: they believe in the benefits of sustainability, but translate this into only limited action. Messaging needs to reach that middle ground. Many understand the consequences that not reaching net zero will have. Universities may be better placed to promote the benefits of low carbon operations and engage people with positive messages around sustainable living.

Achieving environmental sustainability while maintaining financial sustainability means that universities need to navigate carefully. There is sector wide recognition that international operations (e.g. recruitment, outreach, conferences) are fundamentally at odds with sustainability agendas that promulgate reduction of carbon intensive activities (e.g. air travel). Planning to increase international operations and estates development are often at odds with the recognition that action is needed. A radical examination of business models (e.g. offering less onsite international engagement, or modifying estate usage in favour of sustainable development) needs to be on the table. The carbon costs of activities such as travel/recruitment should be carefully weighed against the social/financial benefits gained from these activities. Increasing estate size should be done in a way that focuses on not only building low carbon space, but also decarbonises the existing estate. As Figure 5 shows, Estate size has the strongest correlation with Carbon Emissions out of all variables in the EMR (a relationship that only gets weaker at the end of the scale, where estates are larger and opportunities for carbon efficiency greater).

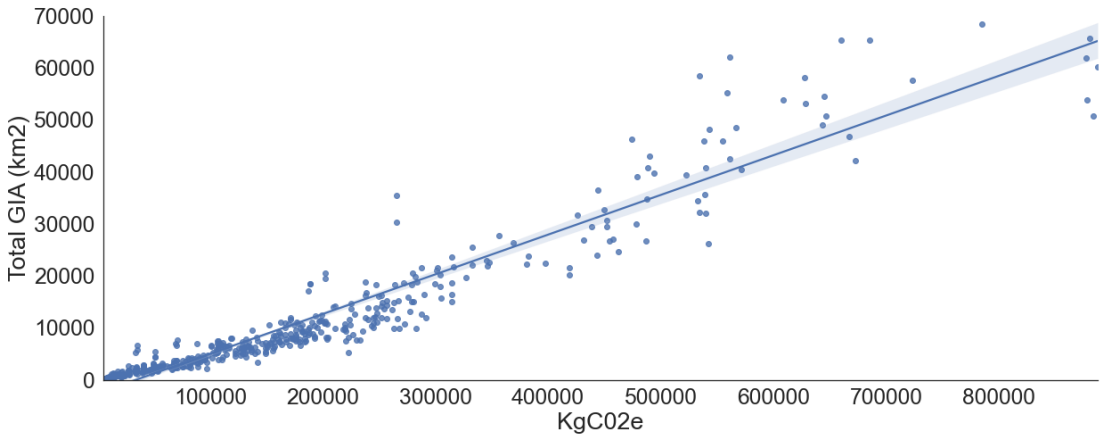

Figure 5

Getting a full picture is difficult, though. Data is not always readily available. This is a particular problem for scope 3 emissions, that are often underreported in terms of both quantity of emissions and breadth of emission source.

Similarly, universities have historically made use of investments in companies that rely on fossil fuels for their operations. This has been met with increasing criticism from student and public voices. Where possible, universities should seek to divest from fossil fuel sources, and reinvest this capital in sustainable options (to retain the financial benefit).

We can help

We can provide bespoke sustainability audit and consultancy, dependent on the needs of the institution. We could help with:

- Monitoring of progress towards frameworks/accreditation
- Advisory work on action to take and next steps to create sustainable approaches
- Creation and implementation of sustainability strategies/policies
- Systems and process review to assess sustainability in practice
- Sustainability data collection and business intelligence
- Benchmarking institutional approaches against sector and non-sector approaches
- Assessing sustainable cultures across the institution, including senior and staff buy in.

For further information on how we can help, or for any other aspect of Uniac's internal audit and assurance service, please do get in touch.

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