



EAUC-Scotland

Public Bodies Climate Change Duties Overview Report

2017 Further and Higher Education Submissions

Analysis & Recommendations

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INTRODUCTION

The Public Bodies Climate Change Duties (PBCCD) Reports from all 19 Universities and 25 Colleges required to comply with Reporting Duties were submitted for the second mandatory year on 30 November 2017. The data submitted predominantly covered 2016/17 for these 44 Scottish Further and Higher Education (FHE) institutions. The inclusion of Integrated Joint Boards meant that the number of Public Bodies increased from 150 in 2016 to 180 in 2017; meaning that the FHE sector now represented 24% of the reporting organisations. This analysis report for the Scottish Funding Council will summarise the data collected and provide comparisons between 2015/16 and 2016/17 for all seven sections of the PBCCD reports.

After the announcement in June 2016 that Scotland had reached its carbon reduction target six years early (with 42% carbon emissions cut by 2014), a lot of engagement has been done by the Scottish Government to plan for further carbon reduction targets. From the end of 2016 to the submission date in November 2017 there has been a lot of progress with a consultation on the new Climate Change Bill in March 2017. Following this the new Energy Strategy and Climate Change Plan (RPP3) was released in December 2017 following engagement workshops. Universities and Colleges have seen carbon mitigation and adaption rise up their agenda as well, with EAUC-Scotland assisting the Scottish Funding Council to expand on the Outcome Agreement guidance in relation to Leadership in Environmental and Social Sustainability (Appendix A). An important part of this guidance was the indication that FHE institutions should be completing the recommended 'Wider Influence' section of the PBCCD reports.

Work continued throughout 2016 and 2017 supporting the FHE organisations improve their reports for the annual submission. Partnership with Sustainable Scotland Network (SSN) and other sector partners has helped us deliver training, updated guidance and one-to-one support to make sure that every institution was able to submit their report in November 2017:

- Recommended Section webinar and resources
- Updated reporting guidance
- Refreshed and promoted reporting resources page
- SSN presented at EAUC-Scotland Forum meeting
- Smaller Institutions Sustainability Meeting – peer review session trail
- Adaptation Sector Support Scoping Event with Adaptation Scotland

Reporting Quality

As this is only the second year of required reporting, trends will be difficult to indicate but comparisons with the 2015/16 data will be made. The fact that all 44 FHE institutions submitted reports, in comparison to 42 institutions in 2016, shows an improvement in engagement with the process. SSN noted that generally the reports appear to be improving in quality each year too, with fewer quality assurance checks needed. Some comments throughout the report in relation to quality have been given by SSN to EAUC-Scotland as informal feedback.

Table 1: Number of FHE institutions reporting per year

Submission Year	No. of institutions who reported	% of eligible FHE institutions who reported
2015 (optional)	29	66
2016 (required)	42	96
2017 (required)	44	100

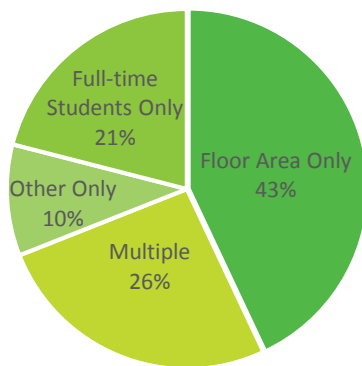
ANALYSIS & RECOMMENDATIONS

Section 1: Profile of the reporting body

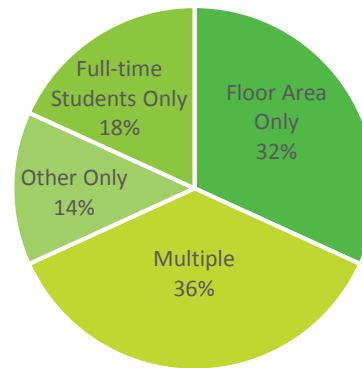
The profile data for each of the institutions has been filled out more thoroughly this year in 2016/17 than in 2015/16. We can see from Graph 1 and 2 a comparison between 2015/16 and 2016/17 that institutions have submitted additional metrics to last year. An increase in institutions using multiple metrics allows for further data analysis specific to educational bodies, in particular with more institutions providing students numbers as well as floor area.

Alignment of the Reporting Year was discussed with the sector as committed within last year's Analysis Report, as 38 of the 44 institutions use the Academic Reporting Year with the other 6 institutions opting to use the Financial or Calendar Reporting Year, and standardising this would allow better comparison. However, due to the individual reporting style of the institutions, in particular some of the smaller colleges whose carbon data is handled by the Local Authority, it was deemed more appropriate to maintain the Reporting Year as used in 2015/16 to keep consistency throughout this small number of institutions' reported data history.

Graph 1: Distribution of metrics used 2015/16



Graph 2: Distribution of metrics used 2016/17



Section 2: Governance, management & strategy

Extensive work has been done analysing the data from Section 2 of the PBCCD Reports. The information gathered in this section has helped inform the EAUC-Scotland [Sustainability Committees and Strategy Report](#) and continue work to improve sustainability leadership in Scottish FHE institutions.

In the previous report for 2015/16 it was reported that 74% of institutions had documentation relating to Climate Change; this encompassed Carbon Management Plans, Climate Change Action Plans and Strategies. Institutions have provided more information this year and therefore for 2016/17 data we are able to break statistics down further to better analyse the documentation structures and processes in place with the FHE institutions (Table 2). Overall however, it appears that the number of documents (Carbon Management Plans, Climate Change Action Plans and Strategies collated) has decreased this year, with only 68% of institutions providing information to Question 2d 'Does the body have a climate change plan or strategy?' in comparison to 74% in 2015/16. This slight decrease could be explained by the fact that two more institutions completed the PBCCD reports in 2016/17, and we are aware of 5 institutions currently in the process of updating their strategies or plans.

Table 2: 2016/17 number of Universities & Colleges with Climate Change related documents

	Sustainability Strategy	Carbon Management Plan	Climate Change Action Plan	Other Policies
Colleges	3	10	1	16
Universities	4	10	2	18
% of Universities & Colleges (44)	16%	45%	7%	77%

Only 16% of institutions have Sustainability Strategies or sustainability embedded into the wider institutional strategy. What we can see in Table 3 is that Sustainability Governance and Strategy has significantly moved up the agenda however, with 23 institutions listing it as one of their ‘Top 5 Priorities’ for the coming year, when this hadn’t been a main theme identified in the previous reporting year. Sustainability Strategies are an important focus as it was outlined within the Outcome Agreement Guidance for 2017/18 that institutions should ‘demonstrate action with a dedicated Sustainability Strategy, or the embedding of environmental and social sustainability within the wider corporate Strategic Plans’ (Appendix A).

Sustainability Committees or similar groups were also analysed within the EAUC-Scotland’s supplementary report, with findings showing that 66% of the 44 institutions who submit PBCCD reports had a form of committee in place to address sustainability and Climate Change mitigation and adaptation. EAUC-Scotland will be able to tailor support for the sector to create and embed Sustainability Strategies and Carbon Management Plans with this clearer outline of the institutional committees and types of documentation relating to Climate Change. The progress will be monitored through next year’s PBCCD submitted reports.

The Top 5 Priorities for the FHE sector are similar to reporting year 2015/16 (Table 3), with Estates being the most recorded activity to be addressed in the coming year 2017/18; this includes building management, renewable projects and transport and waste. The key contacts who complete the PBCCD, in particular Section 3 on carbon emissions, are predominantly estates or sustainability focused professionals often based within Estates departments, which could explain the trend for these types of projects to take priority. Generally institutions are working through the ‘low-hanging fruit’ project, however these types of quick-wins in carbon reduction will be soon need to be replaced by larger and more innovative projects; this will need to be considered by the SFC as well as EAUC-Scotland in terms of support identifying new opportunities and collaborative approaches to projects.

Table 3: Indication of priority area for institutions to address climate change

Priority	Number of institutions with priority in Top 5	
	2015/16	2016/17
Estates	41	32
Engagement	26	25
Curriculum	11	10
Adaptation	10	10
Strategy & Governance	-	23

Many institutions picked Governance and Strategy priorities for this reporting year as developing these was an important aspect of the Outcome Agreement Guidance, as mentioned above. This is encouraging

to see since it is a key focus for EAUC-Scotland’s 2017-2020 Programme and institutions will be supported with their Governance and Strategy projects. This year there were more Top 5 Priorities listed as ‘Other’, mentioning projects such as financial sustainability, gaining accreditations, and improving project registers. Within this category there was a significant increase in the number of institutions mentioning the implementation of the United Nations Sustainable Development Goals which is encouraging to see, as previously there has been little engagement.

Through the Committee Project EAUC-Scotland plan promote examples of best practice in relation to Sustainability Strategies, Climate Change Action Plans and other policies. Committee structures will also be monitored and supported to improve to help with creating, embedding and communicating Sustainability Strategies and Plans.

Section 3: Corporate emissions, projects & targets

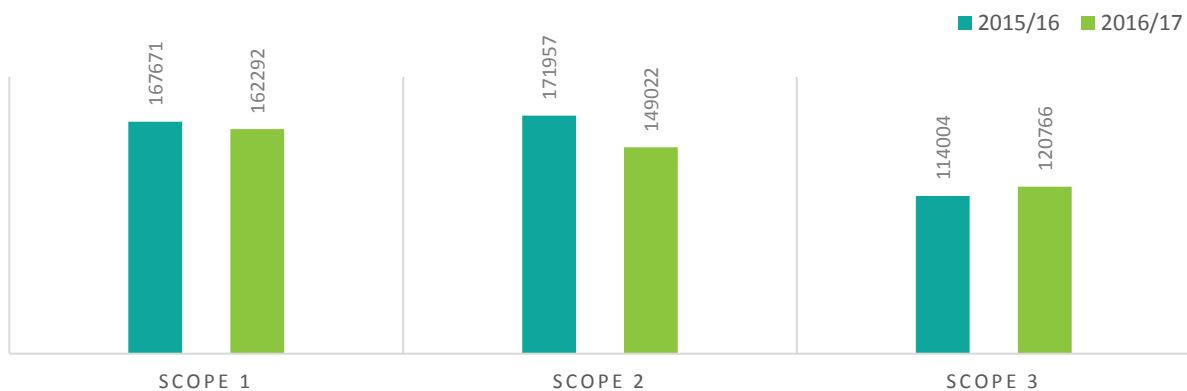
Overall there has been a decrease in carbon emissions between 2015/16 and 2016/17 for the whole public sector as well as the FHE sector (Table 4); specifically a 3.6% decrease can be seen for universities and colleges’ total emissions. The decrease has been attributed mainly to the decarbonisation of the grid reducing the carbon factors used to calculate emissions from electricity consumption. SSN also indicate that 2016/17 was a milder year and therefore this could mean less heating was needed. SSN deduced that approximately 2-3% of the 8% public sector emissions decrease was actual reduction. More data in the next reporting years will show whether the reduction trend continues, though it is a positive outcome for the second year of mandatory reporting.

Table 4: Annual carbon emissions for public sector and FHE sector

Carbon Emissions	2015/16 (tCO ₂ e)	2016/17 (tCO ₂ e)	Reduction of total (%)
FHE Sector	453 632	437 709	3.6
All Public Bodies	3 268 592	3 022 885	8.1

The emissions data is broken down further into the three scopes in Graph 3. This shows the reductions between reporting years for FHE lie within Scope 1, with a 3% decrease, and more predominantly within Scope 2, with a 13% decrease (see Table 5 for description of each scope).

Graph 3: FHE GHG Emissions by Scope (tCO₂e)



However a 6% increase in emissions can be seen for Scope 3. Although an increase in emissions is not the intention for universities and colleges, the reasons for the increase can be viewed positive in some respects. The increase could be due to universities and colleges identifying and building in more reporting mechanisms for indirect emissions, working with partners and companies to clarify data to be reported. Scope 3 continues to be a difficult area for organisations to tackle due to the service or process through which the emissions are created being out with the direct control of the university or college, however their activities within the institution will influence Scope 3 emissions; therefore more staff and student engagement as well as partnership work can obviously be done in reducing these emissions now that they have been identified.

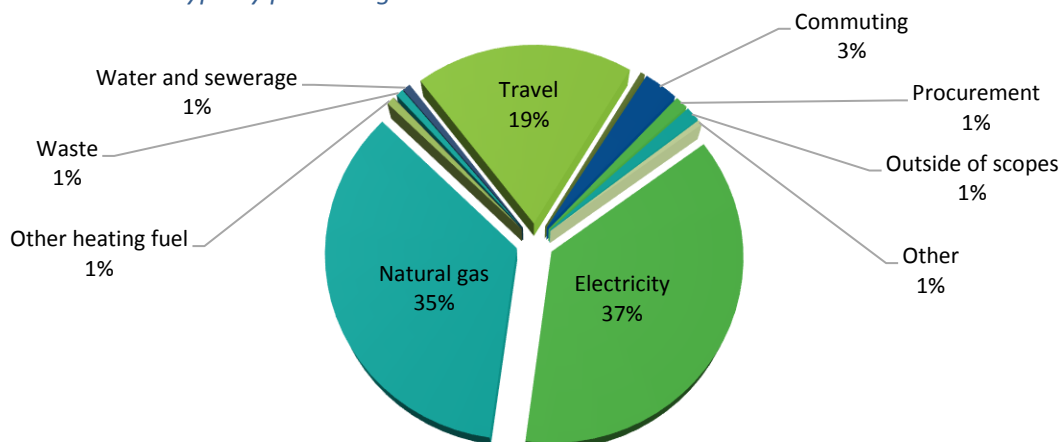
Table 5: Description of carbon emission Scopes

Scope 1	Direct greenhouse gas emissions which the institution has control over, such as facility fuel consumption and organisation-owned vehicles
Scope 2	Indirect greenhouse gas emissions from the generation of purchased electricity, steam, heating and cooling consumed by the institution
Scope 3	Indirect greenhouse gas emissions which are a consequence of the activities of the institution, but which they do not directly control, such as sending waste to landfill, leased properties within their boundary, and business travel

As was the case in 2015/16, natural gas and electricity are the main emissions types (Graph 4), with travel also reporting high emissions. However slight decreases can be seen with these three emissions areas. It was noted by SSN that the quality of the carbon emissions data was improving each year, with less checks and changes being needed from the team to provide accurate institutional information. The drive for renewables and energy efficiency measures is still a high priority for institutions. The focus from the Scottish Government on Energy Efficiency, and consultation that is being undertaken in June 2018 will hopefully provide guidance on more that can be done by the public sector and their buildings.

In terms of travel, many FHE institutions have received grants from Cycling Scotland, Sustrans and other bodies to improve infrastructure and cycling facilities to increase sustainable transport to and between campuses. However many carbon emissions may be caused by grey fleet (vehicles used for business travel which are not owned by the institution and therefore harder to calculate distance and usage), though it is hoped that the transition to electric vehicles and government focus on the sustainable transport sector may support additional reductions in the coming years.

Graph 4: Emissions Type by percentage



Projects

SSN have noted that the FHE sector have done well again reporting on projects. 24,611 tCO₂e have reported to have been saved in the 2016/17 reporting year, which reflects 6% of the overall carbon footprint. However, 16 FHE institutions did not submit data to estimate their carbon savings in the reporting year, therefore some work could still to be done on identifying and measuring the value of projects that contribute to carbon emissions savings.

Electricity remains the most reported emissions type being addressed with carbon reduction projects (Table 6); many institutions have been making improvements with lighting upgrades through a variety of funding sources as it is seen as a relatively 'quick win' with reducing electricity demand. Natural gas and other heating fuels projects saw a significant increase, with many institutions addressing issues through their Building Management Systems and insulation. The universities appear to be able to mobilize projects easier than the colleges, which may be due to access to funding. However funding through the Scottish Funding Council for College Maintenance, as well as the College Energy Efficiency Pathfinder (CEEP) project have also been reported through the PBBCD Reporting.

Table 6: Comparison table of project emissions by type (tCO₂e)

Emissions Type	2015/16	2016/17
Electricity	19 477	17 580
Natural gas	4 324	6 192
Other heating fuels	32	259
Waste	372	301
Water and sewerage	66	19
Business Travel	14	166
Fleet transport	30	45
Other	-	49
Total	24 315	24 611

As it is a Scottish Government priority ('2020 Route Map for Renewable Energy in Scotland') to focus on renewable, we have broken down the data on projects relating to renewables in Table 7. Similar statistics to last year show that there is a slight increase in renewables projects instigated within the 2016/17 reporting year, but with institutions still favoring Solar PV and biomass. Air Source and Water Source Heat Pumps have seen a rise from last year.

Table 7: Number of renewable energy technology projects by source

Technology	Number of projects	
	2015/16	2016/17
Solar PV	22	21
Biomass	10	12
Solar thermal	6	6
Ground Source Heat Pump	6	7
Wind	2	0
Other	1	1
Biogas CHP	1	0

Air Source Heat Pump	1	3
Water Source Heat Pump	0	2
Total	49	52

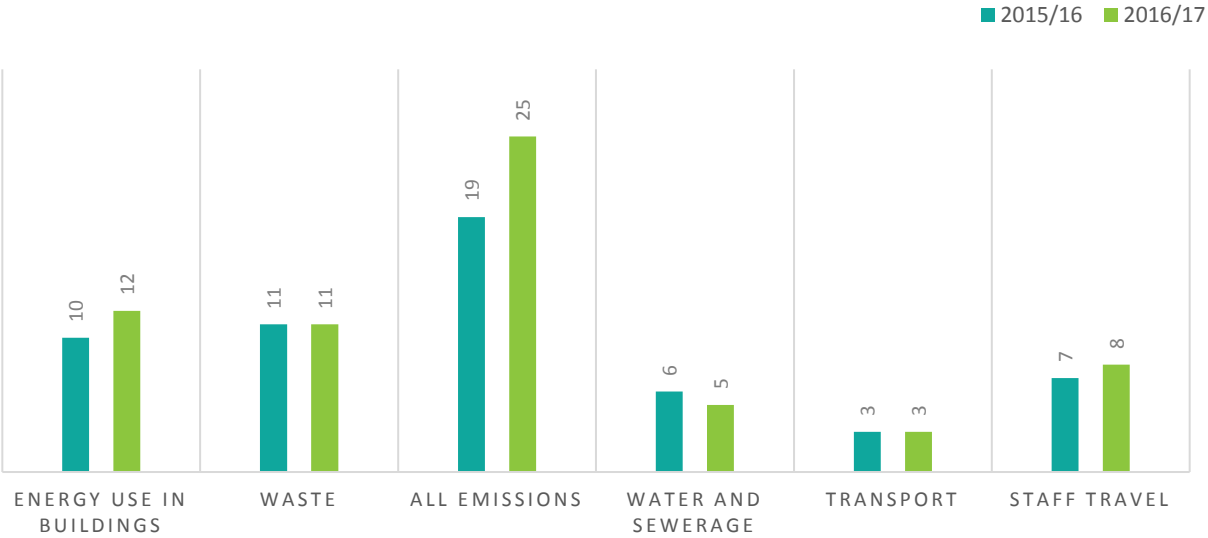
EAUC-Scotland will be continuing to encourage institutions to keep project registers up to date to allow for quick responses in the event of funding becoming available, as a lack of time to scope projects is often cited as a reason why institutions choose not to apply when funding opportunities arise.

Targets

Targets were reported by 33 institutions in 2016/17, an increase on last year, with multiple targets from some institutions meaning that there were 64 different targets recorded in total (Graph 5). Feedback from SSN on targets has been that for the whole public sector it is a difficult section to evaluate, as there are multiple varying factors such as scope, boundaries, units used and reporting time, all of which impact on reporting consistency. Most educational bodies report targets on the academic year but, as with the overall reports, there are 3 institutions who report targets on the financial year. Research by SSN has found that universities are less likely to meet targets than other public bodies but are better at meeting relative targets over absolute targets. This trend could be due to the growth of the sector, both with students and estates. It was found that colleges are the opposite, and are more likely to reach targets since their growth is not at the same level. It was suggested in the report that more projects savings are needed to meet these targets.

Targets are high on the agenda with EAUC-Scotland as the UK Government are currently looking at setting a voluntary carbon emissions reduction target. Discussions have already started with the Scottish FHE sector as to whether this would be possible to implement and monitor in line with the Scottish Government targets. A working group will be set up to discuss this possibility, as the consistency in reporting variables was the main issue highlighted in the first discussion.

Graph 5: Number of targets for each emission source



An estimated carbon footprint for next year’s reporting, to be submitted in 30 November 2018, shows a decrease in the sectors footprint again (Table 6). This is based roughly on the anticipated carbon savings from projects to be implemented 2017/18.

Table 6: Carbon footprints from current reporting year and expected for next reporting year

	Amount of carbon (tCO₂e)
2015/16 Carbon Footprint	453 632
2016/17 Carbon Footprint	437 709
2017/18 Expected Carbon Footprint	434 476

EAUC-Scotland will continue to work with SSN to support the sector with carbon emissions reporting and will identify and provide training as required.

Section 4: Adaptation

The Adaptation section of the PBCCD reporting has seen a slight improvement in submissions from universities and colleges compared to the reports submitted in 2016, with more institutions reporting on activity in relation to identifying climate change risks. The majority of institutions have reported that for 2017/18 they will be undertaking climate risk analysis and addressing adaptation processes in the coming year.

The main concern from the previous year was the confusion between mitigation and adaptation activities. This still continues with a general trend with the submissions within this section is the referencing to flood risk in relation to scoping exercises for climate risk. Although a relevant area for Scottish institutions, it is hoped that through engagement exercises and updated guidance from EAUC-Scotland and Adaptation Scotland that institutions will be able to broaden the scope of risks related to climate change. On a similar note, many institutions noted that Business Continuity Plans are being used - more information would be needed to understand whether climate change risks are embedded within these documents.

Adaptation Scotland has been facilitating regional groups and projects to identify and address Climate Change Risks in collaboration with local authorities, NHS and other public bodies. Through EAUC-Scotland promotion and assistance of these groups it is hoped that more Climate Change Adaptation places and procedures will begin to evolve over the next reporting years.

Section 5: Procurement

Continuing on from last year’s reporting success, the Procurement section was completed thoroughly again in 2016/17. Compliance with the Procurement Reform (Scotland) Act 2014 is a main driver for the universities and colleges, often with procurement staff from APUC being situated within the institutions’ internal department. A Sustainable Procurement Policy or Strategy was cited by 84% of the institutions, and the remaining 16% mentioned the use of APUC’s frameworks. Only 2 institutions provided no information on their procurement policies.

EAUC-Scotland will continue to collaborate with APUC to investigate how we can support the sector further with reporting on procurement.

Section 6: Validation

The validation process was an area that EAUC-Scotland and SSN worked collaboratively to support, with issues being addressed directly at FHE sector events and better explained through the SSN guidance. More institutions correctly reported in line with this validation process this year - the previous year had highlighted some misunderstanding between internal, peer and external validation processes.

As with the previous year, the most common type of validation was internal, with either high-level approval from internal bodies such as committees or individual managers. A limited numbers of institutions opted for external validation, with the majority explaining that the external validation was only in relation to waste as it was offered by their waste collector. The HE institutions noted that the data that they submitted would be validated through the Higher Education Statistics Agency (HESA) Estates Management Returns, however the submission date for this is 3 months after the PBCCD Reporting deadline so no verification had taken place on the data submitted.

Ten institutions in EAUC-Scotland's Smaller Institutions Sustainability Group tested the SSN format for peer-evaluation by completing a workshop-based discussion during one of the group's meetings, prompted by questions provided by SSN and facilitated by EAUC-Scotland. Feedback from the workshop indicated that it was a useful knowledge-sharing exercise, which allowed many institutions the confidence in their reporting they had lacked in the previous year.

EAUC-Scotland will be looking to provide the peer-evaluation style of validation workshop for more institutions in preparation for the 2018 deadline.

Wider Influences Section (Recommended)

This section of the reports has seen a significant improvement in entries, with 26% institutions submitting information in 2016 and 52% of institutions in 2017. EAUC-Scotland put an emphasis on encouraging institutions to report on this section through a dedicated webinar and resources, as well as during EAUC event and communications such as the Forum and Smaller Institutions Sustainability peer review workshop. The increase resulting from this effort is encouraging to see, as this is an important area for universities and colleges to evidence the work that they are doing beyond carbon reporting, and linking to their core business areas of education and engagement

Partnership work was the most reported area, with 59 entries from the 20 institutions who completed that area of the Wider Influences Section. Other areas that were reported on included 'Food & Drink' and 'Resources Use', as well as 'Education' which EAUC-Scotland will be encouraging more institutions to report on in the next year's reports.

Some good examples that were highlighted in this section include the amount of institutions engaging with student and awareness raising campaigns through dedicated 'green weeks' or similar events. EAUC-Scotland will be looking to promote some of these activities through the Sustainability Exchange and sector events over the coming year.

SUMMARY & CONCLUSION

The second mandatory year of the Public Bodies Climate Change Duties Reporting has shown significant progression for universities and colleges with carbon and sustainability reporting. The 2017 submissions were a success, with all 44 Scottish Further and Higher Educational institutions submitting reports, and advances being seen within each of the reporting sections.

Feedback from SSN on the quantity and quality of the data submitted shows that the institutions have improved their understanding of the reporting process. Many developments can be seen in Section 1 on Profiles, Section 5 on Procurement and Section 6 on Validation, with more informative data being submitted and progress within the institutions being visible as they take on the challenge of addressing climate change adaptation and mitigation.

A few headline points to note:

- There was a 3.6% decrease in sector emissions from 2015/16 to 2016/17
- The sector contributed 437,709 tCO_{2e} (14%) to the overall public sector carbon emission of 3,022,885 tCO_{2e}
- Estates, Engagement, Curriculum, Adaptation, Strategy & Governance are all Top Priorities for institutions in 2017/18
- Following the successful 'peer validation' workshop, more will be rolled out for next reporting deadline
- 23 of the 44 institutions completed the Wider Influences section of the reports compared to 11 institutions last year

Section 3 on Corporate Emissions, Projects and Targets showed better quality of data being submitted, with less editing having to be done by SSN after completion. The overall decrease in carbon emissions is a promising start – but with the decrease attributed to the decarbonisation of the grid and changing carbon factors it will be important for the sector to be focusing on energy efficiency rather than carbon factors decreasing to reduce their carbon emissions. The number of projects in 2017 and the planned projects for 2018 are a good indication of the drive from the sector to continue reducing their energy usage and tackle carbon emissions.

Governance and Leadership are an important area, with the SFC Outcome Agreement Guidance for 2018/19 specifying that institutions should be evidencing their Leadership in Environmental and Social Sustainability through their PBCCD Reports an important new driver for action. More work will be undertaken by EAUC-Scotland through the next reporting year to support institutions' committees and sustainability groups to set out intentions and targets in policy and strategy documents.

The significant increase in Wider Influence section completion from institutions is a positive step, and it was helpful to have so many examples of good practice being submitted, allowing better insight into the wide variety of work going on. This area will continue to be supported by the EAUC-Scotland team, as it is one of the most important areas for universities and colleges, enabling them to demonstrate the impactful work in education and engagement which helps class them as 'major players' within the Public Bodies Duties.

The institutions have also adjusted well to the reporting timeline and process, with less requests for support on reporting coming through the EAUC-Scotland helpline or to the SSN team this second mandatory year.

Since the 2016/17 reports were submitted, the SSN programme, which has supported the Scottish Government with the PBCCD reporting process, has been retendered, with the tender awarded to a joint bid from the Edinburgh Centre for Carbon and Innovation (ECCI) and Sniffer. EAUC-Scotland are working with the new SSN team to determine how support for the sector will continue and improve.

Looking ahead, the reporting format will stay this same for the 2018 reporting year, and any changes going forward will be widely communicated with the sector by both EAUC and SSN. With updated Guidance within the SFC Outcome Agreements, and the suite of support on offer from EAUC-Scotland and SSN, it is hoped that the 2018 submissions will see further improvements in subsequent reporting years in completeness and quality throughout all sections of the reports.

APPENDIX A

SFC Outcome Agreement Guidance 2017/18 in collaboration with EAUC-Scotland Leadership in Environmental and Social Sustainability

The Climate Change (Scotland) Act 2009 set ambitious targets for carbon reduction in Scotland, and led to the requirement for Colleges/Universities to submit an annual Public Bodies Climate Change Duties (PBCCD) Report, detailing their compliance. The Environmental Association for Universities and Colleges (EAUC) will support development of effective emissions reduction action plans, and work with SFC through implementation of their own 2017-2020 Outcome Agreement to monitor continual individual and sector progress on both the quality of reporting and actions to address climate change impacts. Institutions are expected to complete both the 'Required' and 'Wider Influence' sections of PBCCD Reporting.

Building upon the Universities and Colleges Climate Commitment for Scotland, we expect all institutions to demonstrate leadership in addressing environmental and social sustainability challenges. Universities/Colleges must outline their climate change and sustainability ambitions and targets in Outcome Agreements, and demonstrate action through implementation of a dedicated Sustainability Strategy, or the embedding of environmental and social sustainability ambitions within corporate Strategic Plans. Progress should be reported through PBCCD Reporting submissions and the Outcome Agreement process. With support available through the EAUC's programme, demonstrating leadership is expected to include senior-level strategic commitment, effective staff and student engagement, partnership working through internal and external networks, and meaningful progress on both climate change and wider environmental and social sustainability.

We expect leadership in environmental and social sustainability to strengthen the competitiveness of Scottish tertiary education, supporting SFC priorities by minimising financial and reputational risks, offering innovative opportunities for growth, assisting in attracting and retaining talented staff, enhancing the learner experience, and ensuring students develop the understanding of environmental and social sustainability required for the workplaces of tomorrow.

APPENDIX B

Best practice case studies

SSN highlighted in the '[Analysis Report - Climate Change Reporting 2016/17](#)' some of the case studies of best practice throughout the submitted individual reports. Here we have collated the FHE sector case studies which were highlighted.

Spotlights 2016/17

- Strathclyde University student residences are competing to save energy and recycle. The hall which saves the most energy gets free Ben & Jerry's ice cream! Carbon savings of 34 tCO₂e/annum are expected from capital costs of £4,000 plus £1,000 annual operational costs.
- Based on heat loss evidence from thermal imaging studies, West Lothian College completed a two-year programme to install cavity insulation to all college buildings in 2016/17. The capital cost of £40,000 is estimated to save £15,000 and 120 tCO₂e per annum.