



Cynulliad National  
Cenedlaethol Assembly for  
Cymru Wales

**Y Pwyllgor Archwilio**  
**Audit Committee**  
Bae Caerdydd / Cardiff Bay  
Caerdydd / Cardiff CF99 1NA

Mr Jeremy Colman  
Auditor General for Wales  
Wales Audit Office  
2-4 Park Grove  
Cardiff  
CF10 3PA

14 December 2005

*Dear Auditor General,*

**AUDIT COMMITTEE REPORT : Energy and Water Management in the  
Higher Education Sector in Wales**

I enclose a copy of the Welsh Assembly Government's response to the recommendations made by the Audit Committee in its report *Energy and Water Management in the Higher Education Sector in Wales*. The response was laid before the Assembly on 13 December 2005 in accordance with Standing Order 12.5. It can also be found on the Assembly intranet and internet sites.

The Committee would be grateful for your advice on the contents of the response and on any follow-up action which the Committee might take.

Yours sincerely

**Kathryn Jenkins**  
**Clerk for the Audit Committee**

Kathryn Jenkins  
Clerk - Audit Committee  
National Assembly for Wales  
Cardiff Bay  
CF99 1NA



**Jane Davidson AM**

Minister for Education and Lifelong Learning  
Gweinidog dros Addysg a Dysgu Gydol-Oes



Llywodraeth Cynulliad Cymru  
Welsh Assembly Government

Cardiff Bay / Bae Caerdydd  
Cardiff / Caerdydd  
CF99 1NA

Our Ref: SF/JD/0483/05

Your Ref:

Janet Davies AM  
Chair – Audit Committee  
National Assembly for Wales  
Cardiff Bay  
Cardiff  
CF00 1NA

12<sup>th</sup> December 2005

Dear Janet,

Thank you for providing a copy of the Audit Committee's report on Energy and Water Management in the Higher Education sector in Wales to the First Minister on 2<sup>nd</sup> November. He has forwarded it to me as Minister for Education and Lifelong Learning as my portfolio encompasses both the Higher Education Funding Council for Wales (HEFCW) and the higher education sector in Wales.

Please find attached a list of recommendations arising from the report, together with the Welsh Assembly Government's response to those recommendations.

Yours sincerely,

**Jane Davidson AM**  
Minister for Education and Lifelong Learning



BUDDSODDWR MEWN POBL  
INVESTOR IN PEOPLE

**The Welsh Assembly Government's response to the report of the National Assembly Audit Committee's report on Energy and Water Management in the Higher Education Sector in Wales: Committee Report (2) 04-05**

The Welsh Assembly Government is grateful for the report. We welcome the findings and offer the following response to the nine recommendations in the report.

- 1 Effective energy and water management is not possible without robust systems for monitoring consumption. We recommend that the Funding Council identifies those elements of the monitoring and targeting system employed by Cardiff University that might be replicated beneficially elsewhere, and work with Cardiff University to disseminate good practice in the development of these systems more widely across the sector in Wales.**

Accepted.

**Comments**

The Funding Council believes that further progress in improving energy efficiency and water consumption can be made by developing systems that provide not only consistent measurement of energy and water performance throughout the Welsh HE sector, but will also assist the sector in addressing the challenges posed by the Energy Performance of Buildings Directive. The development of effective targeting and monitoring systems assists institutions to identify specific areas of high energy and water use, enables utility bills to be assessed, and provides an indication of current performance against previous data. In the interim progress has been made with four of the institutions who were cited as developing a targeting and monitoring system. One has established an appropriate system, one is currently out to tender for an appropriate system and the remaining two will receive additional guidance on this area from the Carbon Trust prior to 31 March 2006.

The Funding Council intends to work collaboratively with the H.E. sector to assess appropriate systems which provide effective targeting and monitoring ie. The identification of areas of high consumption, and the ability to compare past and present performance. Since the publication of the Auditor General for Wales' report, the Funding Council has continued to develop a deeper understanding of the system in use at Cardiff University. This has included meeting Dr Knight of Cardiff University and discussions with other institutions who have or are currently developing systems. A presentation was made to the all-Wales Association of Directors of Estates by Dr Knight in September 2005 outlining the scope and operation of the system.

- 2 The development of new benchmarks for energy and water consumption, and the collation of consumption figures as part of the Higher Education Estates Management Statistics, should greatly improve institutions' ability**

to compare their energy and water consumption with other similar institutions. We therefore recommend that the Funding Council should use this information to critically examine the energy and water consumption performance of the twelve institutions in Wales, and target its efforts on supporting improvement in those institutions that appear to be under-performing.

Accepted.

#### **Comments**

The information provided within the Estate Management Statistics will provide a useful overview of annual trends. Benchmarks will be of value in encouraging enhanced performance in energy and water management.

These will be used to best effect where energy and water consumption can be accurately attributed to specific uses and building types. This will be facilitated by the development of the targeting and monitoring systems referred to above which will provide the Funding Council with reliable evidence to identify poor performance and to identify the most appropriate corrective action. An annual report will be developed as an appropriate way of monitoring progress. In the medium term, it is hoped that UK-wide benchmarking currently being developed by the Higher Education Environmental Performance Initiative will aid comparison and highlight best practice. New benchmarks for laboratories are due to be introduced by the HEEPI in Spring 2006.

- 3 Local energy and water surveys are an important means of identifying opportunities, and practical measures that might be taken, to deliver improved energy and water efficiency. And new opportunities will emerge over time as technology develops. We recommend that all institutions undertake energy and water surveys on a regular basis to identify potential opportunities for improved energy and water efficiency. In doing so, institutions should focus their attention, where possible, on areas that appear to demonstrate higher than expected energy and water consumption. We also recommend that the Funding Council should challenge institutions on the action taken in response to surveys already completed.**

Accepted

#### **Comments**

The Funding Council has already requested the sector to respond to outstanding recommendations in respect of energy and water management reports and has offered consultancy through the Carbon Trust to address particular areas of concern where further advice is required. The University of Glamorgan has implemented the majority of the recommendations made in a previous energy survey. This has included regular surveys to identify dripping taps, time switches on vending machines, a new boiler, and replacement lighting within the sports hall. University of Wales, Newport was cited in a

newspaper article (Western Mail Focus on Energy October 2005) written by the Carbon Trust for the progress it has made in implementing energy management improvements many of them highlighted in an earlier Action Energy survey. This has included development of sub-metering as well as numerous small efficiency improvements resulting from improved use of time controls and thermostats. The Carbon Trust has been commissioned to carry out additional energy surveys at six higher education establishments. To date two of these surveys have been completed and the remaining four will be completed by 31 March 2006, at which point all institutions will have a current survey in place. The Funding Council will engage the Carbon Trust to review and monitor implementation of energy survey recommendations.

- 4 Formal energy and water management policies demonstrate the commitment of institutions to tackling consumption and efficiency issues, but it is also critical that policies are consistent with institutions' broader estates strategies and are translated into practice. We recommend that the Funding Council, drawing on advice from the Carbon Trust, refresh their guidance on the development of energy policies and related action plans, and work with institutions to fully incorporate considerations of energy and water efficiency within institutions' estates strategies.**

Accepted.

#### **Comments**

The Funding Council will be providing advice to institutions on appropriate energy and water management policies by March 2006, and also stressing the importance of institutions establishing management structures capable of ensuring effective implementation. The Funding Council has already alerted the sector to the need to incorporate energy and water efficiency criteria within estate strategies, and where appropriate to include this within the evaluation of estate options. The energy efficiency and sustainability implications of specific options should be considered where appropriate and be contained within estate strategies. A seminar targeted at Vice-Chancellors, Pro Vice-Chancellors and senior members of staff in higher education establishments who have control or influence within this area is being arranged for early March 2006. HEFCW will be issuing revised advice on energy and water management policies in advance of this.

- 5 Energy and water consumption can be reduced through simple, no-cost housekeeping measures, such as turning off lights in empty rooms, which require the co-operation of staff and students. Raising the awareness of staff and students can therefore make a valuable contribution to institutions' efforts to reduce consumption and improve efficiency. We recommend that the Funding Council and institutions together seek to identify, and where appropriate implement, the good practice already operating in some institutions in raising awareness among staff and students of the importance of energy efficiency. Good practice includes the development of awareness raising campaigns and the establishment of cross departmental task groups, including student representatives,**

with responsibility for tackling energy and water consumption. We also recommend that, where energy and water saving measures such as automatic power down facilities on computing equipment are available, institutions carry out checks to ensure that these facilities are being used.

Accepted.

#### **Comments**

The Funding Council are already co-operating with the University of Wales, Aberystwyth to identify and develop a sustainable and effective approach to energy awareness which will be relevant and provide practical guidance to the sector as a whole. This work will be completed, in conjunction with the Carbon Trust, during spring 2006.

- 6 HE institutions in Wales do not charge academic departments or individual students living in halls of residence for the energy and water they consume. Although direct charging for energy and water may not be practical in the short to medium term, we recommend that all institutions explore the options for providing financial incentives to individual departments, and possibly even to students in University residences, to encourage more efficient use of energy and water.**

Accepted.

#### **Comments**

There are examples of good practice within this area which will be further researched and tested by the exemplar being developed in conjunction with the University of Wales, Aberystwyth. This includes control of electrical equipment used by students within student residences, and the development of effective induction procedures for students and staff. The Funding Council will encourage the sector to adopt examples of best practice which have a significant influence on energy consumption. This will be done through the energy management working group and the provision of advice within the Estates Manual. In the medium term the development of effective sub metering will provide institutions with the information that will enable them to consider direct energy charging or to provide financial incentives to control energy use.

- 7 Because of their small size, several institutions are limited in the attention they can give to energy and water management because of a lack of staff resources and relevant expertise. We recommend that all institutions clearly identify an individual member of staff to act as the driving force behind energy and water management, even if they are unable to make a valid business case for a full time energy and water manager. We also recommend that institutions, particularly smaller ones that do not have staff dedicated to energy and water management, should seek opportunities to collaborate with other institutions, to share resources**

and knowledge. Financial support from the Funding Council may be available to support such collaboration.

Accepted.

### Comments

The Funding Council will be asking institutions to identify a senior member of staff with overall responsibility for energy and water management. Where it is not practical to employ a dedicated energy and water manager, the Council will encourage institutions to enter into collaborative arrangements. The Strategic Development Fund is a potential source of funding for proposals of this nature. The Funding Council has established a new energy management working group which provides an effective forum for developing and implementing policy in this area. The Funding Council will be distributing the recommendations and the response to Vice-Chancellors and Directors of Estates in HEIs to further raise the profile of this issue. The Welsh Assembly Government will ensure that the recommendations and the response are also sent more widely to Accounting Officers in the Welsh public sector as energy and water management issues have cross-sectoral significance.

- 8 **As well as establishing specific budgets for investment in energy and water saving measures, some institutions have improved their efficiency by, for example, procuring more efficient products at a higher up-front cost, or by designing additional energy and water efficiency measures into major capital projects. We therefore, recommend that institutions incorporate energy and water efficiency as key criteria within their procurement policies, taking account of whole-life costing, and that the Funding Council works with institutions to help them identify opportunities for energy and water efficiency early in the design stage of new build or major refurbishment projects.**

Accepted

### Comments

The Funding Council have already commissioned a study in conjunction with Swansea Institute to examine how energy efficiency is incorporated within the design process for new buildings and to compare their theoretical and actual energy consumption. This study will be used to provide guidance to the sector on how energy and water efficiency can be included most effectively within the design process and to highlight the scale of the cost savings and efficiencies lost where this does not occur. This work is due to be completed by 31 March 2006

The Council will be undertaking further work to examine how whole life costing can best be incorporated within option appraisal and construction procurement processes so as to explicitly embed the evaluation of energy and water efficiency measures. The Assembly Government believes that energy and

water efficiency are best considered within the wider context of whole life costing, construction quality, and funding.

- 9 **To supplement their own investment in energy and water efficiency measures, some institutions have taken advantage of external sources of funding. We recommend that the Funding Council issues to institutions guidance on the sources of external funding available to the higher education sector that might promote energy and water efficiency, and work with institutions to identify potential schemes to put forward for funding under these programmes. These may include joint schemes between institutions or with other public bodies.**

Accepted.

### **Comments**

The Funding Council will be working with the Carbon Trust to assist institutions to identify and access external sources of funding for energy and water efficiency. The Council will also challenge the sector to identify and bring forward joint projects wherever practical. The development of collaborative projects through the Reaching Higher agenda may provide opportunities for institutions to develop joint energy projects and wider collaboration. The Funding Council will seek to encourage this through its assessment and input into the development of these projects.