Electricity Devolution Programme
Briefing note for institutions
August 2018

THE CAMBRIDGE green CHALLENGE

Introduction

This note is intended as a briefing on the proposed purpose, principles, and processes of the Electricity Devolution Programme (EDP).

A ghost-year will run in 2018/19 with a small number of institutions. No financial transactions will take place during this year, but it will be an opportunity to see how the proposed scheme would operate in practice and to work with institutions to refine the scheme ahead of implementation from 2019/20. It is likely that full implementation will be phased over subsequent years.

If you have any questions regarding the scheme, please get in touch: **environment@admin.cam.ac.uk.**

	Purpose and rationale
Electricity accounts for the majority of our direct carbon emissions	Electricity accounted for 73% of our direct (Scope 1 and 2) carbon emissions in 2016/17. We must reduce our emissions to achieve our challenging targets and to reinforce Cambridge's position as a world-leading education and research establishment.
To drive prudent use of electricity	Our electricity consumption results in significant and ongoing costs to the University – in the academic year 2016/17, electricity costs for the operational estate were over £10.8 million. Clearly, we cannot operate without using electricity and we therefore need to ensure its use is considered in our decision making in order to control spending.
We must endeavour to tackle costs where we have control	Global energy markets and national government policy are driving a trend for year on year increases in electricity costs. These driving factors are beyond our control, but, we must do what we can to reduce our exposure to future cost increases by minimising our electricity consumption. We can control our choices about how we design and use our buildings, and the equipment that we buy and how we use it.

	Principles
Each institution will be responsible for its own electricity use	Each institution will be allocated a budget to pay for its electricity. If use increases, institutions will need to reallocate funds from elsewhere. If use decreases as a result of changes or investments in energy efficiency made by the institutions, they will retain any underspend.
Risk is shared between institutions and the Chest	The risk of cost increases driven by changes in consumption is held by institutions as they have the greatest influence over how much electricity is used. Where cost increases are driven by changes to the unit cost of electricity, the risk will be retained by the Chest.
Phased roll-out	Buildings with robust electricity metering data will be initially included in the scheme – a programme of metering enhancements across the estate is ongoing to facilitate the roll-out of the scheme over a number of years.

Where it's not possible to capture good data, some institutions may not be included in the scheme	In a small number of cases, it may not be possible to capture sufficiently robust metering data to fairly include an institution, or part of it, in the scheme. This matter will be explored further as part of the ghost year and in some cases certain spaces may not be included in the scheme.
The ghost year will be used to test scenarios where direct metering is not practical	There are likely to be cases where direct metering will not be possible, for example, due to the nature of the shared space or the electrical infrastructure. During the ghost year we will test the practicality of including this space using other means, for example, space apportionment.

Consumption baseline

Based on reliable energy data	Your department's consumption baseline will be established using metered electricity consumption figures for at least the past 2 years combined with space data held by Estate Management. The average of these annual totals will be used as your consumption baseline.
Dependent on accurate space data in MiCAD	Which space is occupied by which department will be derived from data held by Estates Management in the MiCAD system. Each year (currently in July / August) Schools are required to update space records through the MiCAD system. This is an essential activity to support the EDP (as well as other activities such as the Resource Allocation Model), so it'll be important that records are updated each year, accurately and in good time.
Using a common data set across all central resource allocation activities	The space data used for the EDP will be the same as that used for other resource allocation processes across the University so that there is a common basis for all activities.
Different approaches to attributing electricity consumption for different scenarios	The most common scenarios for attributing electricity to institutions are shown in Annex A. In these examples, the items labelled M represent electricity meters.

Setting financial budgets

Budgets will be set through the Planning Round	The setting of financial budgets for the EDP will follow the same process as other budgets dealt with in the Planning Round. For some Schools, this will involve asking individual institutions to produce budgets and feed them back to the School for a central submission to AFPA (formerly PRAO). For others, the School will produce budgets centrally. Should they think it necessary, it will be for Schools to prioritise between requests from their institutions. Whatever the approach, Estate Management (EM) will provide support for the preparation of budgets, particularly in the early phases of the scheme. E&E will work with institutions during the ghost year to clarify what support is required.
Based on average unit price across the estate	The Environment and Energy Section will advise the average unit price (p/kWh) to be used for the coming year. The University's energy suppliers provide forecast unit rates for the coming year for each electricity supply across the estate, with the average unit price derived from this data.

Combined with consumption data to arrive at initial budget	The space data in MiCAD will be combined with data in the SystemsLink energy management system to give metered electricity consumption for participating institutions in kWh. This, multiplied by the average unit rate supplied by EM, in p/kWh, will generate the electricity budget.

Adjusting baselines and financial budgets

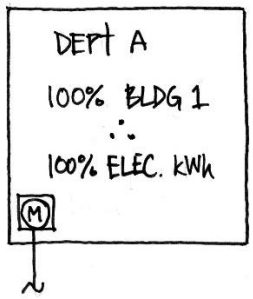
Substantial changes (such as refurbishments) will be accounted for	Baselines and budgets will be amended to account for significant capital works and/or changes to space occupation. The details of this aspect of the scheme will be determined during the ghost year.
Budget increases can be requested but must be justified	If a department decides to change its activities in a way that would require the consumption of additional electricity, it can apply through the Planning Round to increase its budget. However, these requests will be considered in the same way as any other request for additional resource and will require appropriate justification.
If nothing changes, budgets will effectively remain the same	In subsequent years, if your consumption is unlikely to change significantly from your baseline, the process of requesting an electricity budget would be straight-forward as the only change will be an updated average unit price (this typically changes every year).

Support for institutions to reduce electricity consumption

Institutions will be kept informed of progress	Regular updates on electricity consumption will be provided by the Environment and Energy Section. These updates will include confirmation of the consumption baseline and budget and year-to-date consumption, consumption in the last period, and forecast consumption for the whole year.

Support provided to reduce electricity consumption	During the ghost year, support will be developed by the Environment and Energy Section to assist in reducing institutions' energy consumption. This support will include: • Access to Systemslink, the University's energy management software. • Advice on how you can reduce the electricity consumption of your building(s). This could possibly include access to building survey and improvement services, advice on energy efficient plug in equipment, and how to run an energy saving campaign within your institution. • Guidance on how to request changes to your allocated electricity budget as part of the budget setting process. This will involve addressing issues such as buildings that were unoccupied during your baseline assessment period, and estimating the impact that new research equipment and building changes might have on your institution's electricity consumption. • Participants of the scheme will remain eligible to apply for funding from the Energy and Carbon Reduction Project to support local initiatives to reduce electricity use.

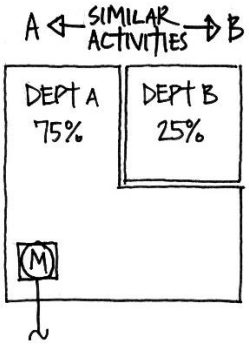
Annex A: Approaches to attributing electricity consumption in shared space



One building, one department

In situations where an institution occupies 100% of a building, it will be responsible for all of the electricity consumption and receive all of the associated budget.

Department A = 100% of M

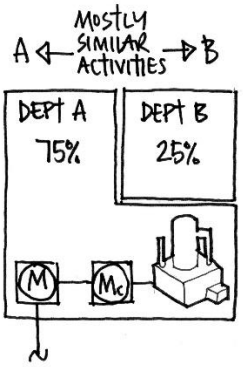


One building, more than one department, similar activities

In situations where buildings are shared by two or more institutions, but the activities carried out are broadly similar, consumption (and therefore budgets) will be apportioned based on the area occupied. This makes updating space data each year particularly important.

The apportioned consumption will include all uses within the 'demise' of each department and will also include central plant (such as air handling equipment, chillers, etc.), divided between institutions on the same basis.

Department A = M x 0.75
Department B = M x 0.25

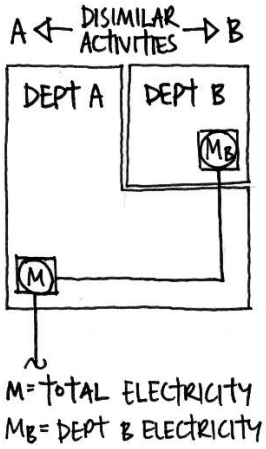


One building, mostly similar activities

In situations where, in the main, the activities carried out by occupying institutions are broadly similar but there is the use of one or more particularly electricity-intensive piece of equipment, then the item(s) in question would likely need to be separately metered (Mc in the example).

As other elements of consumption are similar, they wold be apportioned based on area occupied.

Department A = ((M-Mc) x 0.75) + MC
Department B = (M-Mc) x 0.25



One building, more than one department, dissimilar activities

In situations where buildings are shared by two or more institutions, and the activities carried out materially different, separate metering will be used to establish consumption.

In the example here, M is the building's incoming meter, recording consumption for the whole building. Meter MB records consumption of the area occupied by Department B.

Consumption of Department B = MB
Consumption of Department A = M – MB

Central plant consumption would be apportioned according to area occupied.