Electricity Devolution Programme
Briefing note for institutions, July 2019

Introduction

This briefing note provides an overview of the purpose, principles, and processes of the proposed Electricity Devolution Programme (EDP).

The first ghost-year of the scheme ran throughout 2018/19, with a small number of institutions. We are now running a second ghost-year throughout 2019/20, with a larger number of institutions. As in the first ghost-year, no financial transactions will take place during this year, but it will provide an opportunity to further test the proposed mechanics of the scheme and work with institutions to refine the scheme ahead of implementation.

The first ghost-year of the scheme has proved to be incredibly worthwhile. The feedback that we have received from the participating institutions has been invaluable in helping us to gain a better understanding of how the EDP needs to work in practice, and the support that we will need to provide to institutions throughout the scheme. We have made several adjustments to the proposed principles and processes of the EDP as a result of this feedback, and we are very grateful to the participants of the first ghost-year for their help and support.

We are running a second ghost-year to test the changes that we have made to the scheme, and to seek input from a wider range of institutions. We will also be using this year to address some outstanding details of how the scheme will work, which we were not able to resolve during the first ghost-year.

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	The University Council recently adopted a Science Based Target, which commits us to reducing our energy-related (scope 1 and 2) carbon emissions to zero by 2048, and aspires to achieve this by 2038.
	In 2017/18, electricity accounted for 63% of our scope 1 and 2 emissions. Reducing our electricity use is therefore key to achieving our carbon reduction target.
To drive prudent use of electricity	Our electricity consumption results in significant and ongoing costs to the University – in the academic year 2017/18, electricity costs for the operational estate were over £12.5 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.

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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 to pay for the additional energy. If use decreases as a result of changes or investments in energy efficiency, the institution 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.
Based on robust data	A programme of metering enhancements has been ongoing across the estate for the past three years. We now have building-level metering data for most University buildings. We endeavour to allocate electricity budgets and costs based on robust, metered data wherever possible.
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. As a result, in some cases certain spaces may not be included in the scheme. We are continuing to consider this issue as part of the second ghost-year.
This 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 coming year, we will test the practicality of including this space using other means, for example, space apportionment.

Consumption baseline

Based on historic usage figures	Your institution's consumption baseline will be established using metered electricity consumption figures for the past 3 years, combined with space data held by Estate Management. The average of these annual totals will be used as your consumption baseline.
Accurate space data is vital for ensuring each institution is allocated the right baseline	Which space is occupied by which institution will be derived from data held by Estates Management, in the MiCAD system. Each year, 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 is vital that institutions submit an accurate return to the space survey every year, and by the specified deadline.**

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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	Each year, as part of the Planning Round process, the Environment and Energy Section will work out each institution's electricity budget for the coming year by multiplying: • The institution's consumption baseline (kWh) and • The University's average unit rate for electricity (p/kWh).
Based on average unit price across the estate	The Environment and Energy Section will determine the average unit price of electricity (p/kWh) for the coming year, based on forecast unit rates for each electricity supply across the estate, which are provided by the University's energy consortium.

Adjusting baselines and financial budgets

Material changes to baselines will be accounted for	Baselines and budgets will be amended to account for significant capital works and/or changes to space occupation, where these lead to material changes in an institution's electricity use. The details of this aspect of the scheme are being explored during the ghost-years.
Budget increases can be requested but must be justified	If an institution 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).

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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	Support is being developed by the Environment and Energy Section to assist in reducing institutions' energy consumption. This includes:

- Access to SystemsLink, the University's energy management software, and training on how to use it.

- 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.

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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.
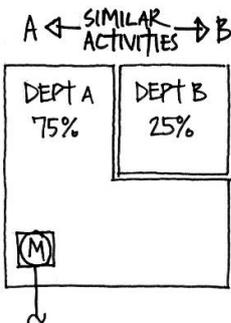
Department A = 100% of M
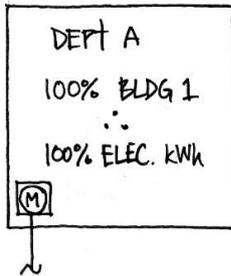
One building, more than one department, similar activities

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
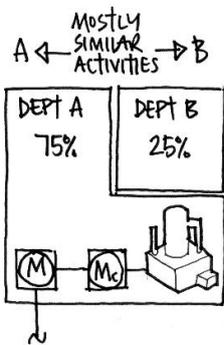
One building, more than one department, dissimilar activities

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.