



An Roinn Airgeadais
Department of Finance

Department of Finance

Resource Efficiency Action Plan 2019

*Prepared by Facilities Management Unit
Department of Finance
finance.gov.ie*

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Department of Finance 2019 Resource Efficiency Action Plan

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Glossary

BMS	Building Management System
DCCAE	Department of Communications, Climate Action and Environment
FMU	Facilities Management Unit
GPP	Green Public Procurement
SUPs	Single Use Plastics

Section 1 Introduction

Green Government Decision

In January 2019, the Government decided that Government Departments and Public Bodies will lead the way in reducing generation of single use plastics (SUPs) and waste. The Decision recognises that the Civil and Public Service must demonstrate their commitment to sustainable development and use its influence to persuade others of the changes required to reduce our impact on the environment.

With that Decision in mind, this Department must:

- **With immediate effect**, not supply, directly or indirectly, *single use* plastic beverage containers, cutlery or straws, unless specific public health/hygiene or safety issues arise.
- By **31 March 2019**, the Department will work with the Office of Government Procurement (OGP) to bring forward proposals on the implementation of green public procurement.
- Develop a Resource Efficiency Action Plan (REAP) for publication by **30 June 2019** in order to assist staff to make savings in water, materials and energy use as well as preventing food waste and maximising recycling within their work environment.
- Establish a network of officials who will lead on implementing the actions within their own Departments. For the Department of Finance, as at June 2019, the Designated Officer is Mr. Michael Rowan of the Facilities Management Unit (FMU).

Resources Efficiency Considerations

The Department of Communications, Climate Action and Environment (DCCA) advised that the REAP should consider energy, water and waste resources, including:

- Upgrade office lighting with energy efficient alternatives
- Optimise use of Building Management Systems controls
- Remove general waste bins from individual desks
- Increase number of bins for recycling and composting
- Reduce flow rates on taps
- Discontinue use of single use plastics throughout organisation
- Establish in-house Green Team from staff and management representatives
- Green Team devises and implements Green Action Plan
- Reflect and promote the Department's green credentials

The Resource Efficiency Action Plan

Background

The Department has responsibility for management in respect of premises and facilities shared with the Department of Public Expenditure and Reform in the Government Campus (which comprises South Block, 7-9 Merrion Row and 14-16 Merrion Street), Miesian Plaza on Baggot Street, St Stephen's Green House on Earlsfort Terrace and Government Buildings in Tullamore. Primary responsibility for this facilities

The REAP will be introduced by the Department to improve how its energy, water and waste resources are managed in respect of these premises. It will allow an assessment of opportunities to achieve efficiencies in relation to: waste production, management and prevention; the reduction of energy bills and charges; heat recovery; optimisation of equipment use; lighting efficiency; and water efficiency. It will also provide opportunities to improve the awareness of management and staff in relation to these matters.

Key headline issues to be addressed are as follows:

Energy

Energy management processes and costs, the Building Management System (BMS), thermal energy usage and energy awareness levels amongst staff are reviewed.

Water

Water usage and management processes and costs, including current costs and water infrastructure are reviewed.

Waste

Waste management processes including reuse, recycling and disposal, costs of collection, breakdown of waste by type and an overview of waste infrastructure are reviewed.

Management

The audit reviews the environmental management system in place, if any, and makes relevant recommendations that typically include the development of an action plan and monitoring programme for delivery of specific environmental Key Performance Indicators.

It undertook the EPA's *GreenBusiness* basic, online Resource Efficiency Rating. The 51% rating received noted that improvements could be made in all areas including Energy (62%), Water (39%), Waste (56%), and Management (44%). Appendices 1-4 briefly outline improvements that may be made in these areas.

The Department will continue to work with colleagues in the Department of Public Expenditure and Reform; the OPW; the Department of Communications, Climate Action and Environment; and our AWS Northern Europe Energy Consultants, on the best ways to maximise and extend efforts under the REAP.

It is important to note that this iteration of the Department's REAP represents the issues identified as most pressing at the time of sign-off (June 2019). The document is intended as a living and dynamic document, which will evolve over the coming period.

Section 2 Current Resource Efficiencies

Background

The Department has undertaken a substantial programme of work in recent years to upgrade its facilities more generally and the work in this regard is set out below. It should be noted that while there have been substantial improvements, the Department is restricted in relation to further resource efficiencies that it can introduce on the Government Campus, due to the heritage status of these buildings. The Department has also achieved resource efficiency gains through the movement of staff in recent years from older, less energy efficient buildings to newer buildings, such as Miesian Plaza which has been deep retrofitted to a high (platinum) standard.

Upgrade office lighting

Energy efficient LED alternatives were identified for the lighting system when South Block in Government Buildings was upgraded in the recent past. This system includes motion detection which automatically switches off the lights when there is no occupation in the offices and common areas such as corridors etc. It has been designed so that variable lighting levels in offices can be set by officers, thus reducing energy consumption and potential for over-lighting.

Window cleaning

In order to maximise the natural light as much as possible, the Department undertakes regular cleaning of the windows. Going forward, green procurement will be applied in sourcing a new cleaning contractor when the current contract expires.

Optimising BMS controls

The Department has staff in place in the Miesian Plaza facility since 2018. This building has achieved the highest level *Leadership in Energy and Environmental Design* (LEED) accreditation, and the Department is an active participant with all tenants to ensure that this standard is maintained.

A limited Building Management System (BMS) is in place in 7-9 Merrion Row, which manages the heating system for the award winning building. The other Department locations in South Block and 14-16 Merrion Street are heritage buildings, these do not have up-to-date BMS in place. However, the Department will continue to work with the OPW to ensure that as new technologies come on-stream they are considered for incorporation into these buildings.

Discontinuation of SUPs

In advance of the Government decision on Single Use Plastics (SUPs), the Department introduced travel mugs and aluminium bottles to encourage staff to reduce their use of takeaway coffee cups and single use water bottles. This is an ongoing programme and FMU will continue to ensure that new staff joining the Department are provided with both reusable mugs and bottles.

The Department is working closely with its contracted facilities management company, responsible for running the onsite canteen and cleaning the buildings in Government Buildings, to engage in the development and success of the REAP. Since March 2019, no SUPs are supplied in the canteen, and all in-house catered meetings are supplied with jugs of water and associated glassware.

Plastic cups used for the water fountains throughout the main South Block Building have been removed. The exception to this is in the main reception area; plastic cups used here are fully recyclable

and reusable. FMU are investigating the best compostable options for the future which may see the total elimination of any plastic products from its inventory.

Moves to Energy Efficient Buildings

Both DFIN and DPER have achieved resource efficiency gains through the movement of staff in recent years from older buildings to more modern, resource- efficient buildings, such as Miesian Plaza.

Section 3 Promoting REAP

Co-ordination of REAP

The DPER has designated an officer (Mr Kieran Sheedy of the Corporate Governance Unit) to lead on implementing the Green Government Agenda within the Department and to work with relevant officials and anchor tenants, as well as the OPW and the Department of Communications, Climate Action and Environment, on the best ways to maximise and extend efforts under the REAP.

The Green Team

The Department established its Green Committee in April 2019, and is comprised of Department of Finance staff across grades and Departmental locations and the Department of Public and Reform is also represented on it. Developments with the Committee can be found through the dedicated online [Hive](#) site.

FMU is working to incorporate all feasible proposals from the Committee that can reasonably be implemented as part of the Department's REAP. Such suggestions include:

- Continued replacement of non-multifunction devices that cannot print in double-sided format;
- Phasing out of paper towel usage, unless specifically required in selected locations;
- More widespread use of segregated waste bins;

Corporate Social Responsibility

More broadly, the Department supports the corporate volunteering initiatives such as An Taisce's Clean Coasts or those driven by local action groups. As appropriate, the Department will consider other endeavours which combine green initiatives with the spirit of corporate social responsibility.

Education and Training

The Department will hold awareness and training initiatives to set out the rationale for the introduction of each measure as the REAP is rolled out.

Section 4 Waste Management

The Department currently uses general waste bins and recycling bags in each office space in every Government Campus building. In 2018, general waste disposed of by the Department amounted to some 12.5 tons. Since its opening in 2018, Miesian Plaza has instituted a policy of waste segregation. In an effort to increase waste stream separation, and harmonise efforts across its locations, the actions below will be delivered in the course of 2019 for the Government Campus (South Block 14-16 Merrion Street and 7-9 Merrion Row). The actions will be delivered in conjunction with a policy of staff education and raising awareness through the rationale for the introduction of each measure.

Waste segregation

The current waste segregation should be improved upon by centralising its collection at designated points throughout each building. FMU has liaised with colleagues in other Government Departments and researched the segregated waste bins available on the market in order to identify the best option for the Department's needs.

A clean and slim option identified would include a 3- and/or 4-way segregation to cover general, organic, recyclable and - possibly - liquid waste. Such bins would be strategically located so as to limit the visual impact into general corridors, and minimise intrusion in more public areas of the Department such as the Ministerial corridor.

Organic Waste

Food/organic waste stream was, until recently, collected as part of the general waste. "Brown" bins were identified as simple solutions for collecting food or other organic waste such as teabags, coffee granules etc. being disposed of as general waste. The Department will begin rolling out new 10 litre "brown" bins, lined with biodegradable bags, to each of the tea stations, kitchenettes and the canteen in South Block, 14-16 and 7-9 Merrion Row. The success of this initial rollout may result in additional bins or, as above, integrated into a slim line recycle station. The earliest date for rollout of these is Q3 or Q4 2019.

Section 5 Energy Management

The successful refurbishment of South Block included the move to introduce low-energy, LED lighting in as many locations as possible. This has seen an electricity cost reduction of approximately €60,000 annually. The environmental benefits include much lower energy consumption. Given the heritage building status of the Department's buildings on Merrion Street, there are limited options for other energy saving measures. As already noted, the Miesian Plaza building has been deep retrofitted to a high (platinum) standard and there are limited options for other energy saving measures.

5.1 Hand Dryers

In addition to improved segregation of waste outlined in Section 3, the Department will seek to reduce the volume of waste from paper handtowels. Annually, the Department disposes of approximately 7 tonnes of these products either as recycling or general waste. There will be a need to retain a small amount of such products, but the intention is to severely reduce dependence upon them.

Approximately 30 new, energy efficient hand dryers may need to be installed throughout the Department's Campus locations. This green initiative was initially preceded by discussions with the OGP on the available frameworks in place for hand dryers. It was confirmed that OGP has no frameworks in place for these items, and no plans are anticipated in the near-future to establish such a framework. As such, the Department will undertake its own procurement of these items, in line with Public Procurement Legislation.

Advanced research has resulted in the Department contacting five suppliers to get a range of products and prices for hand dryers. The information obtained indicates that the ex VAT price for 30 such items range approximately from €4,000 to €28,000. These costs do not include installation, maintenance or other (unforeseen) costs. A feasibility study will be carried out in the latter half of 2019 following consultation with senior management, and the relevant OPW section (mechanical and electrical) on the appropriateness for such items.

Section 6 Future projects

The Department of Finance recognises its responsibility to promote green procurement and support Ireland's environmental and wider sustainable development objectives. In this regard, the Department will work with the Office of Government Procurement insofar as possible in relation to Green Public Procurement (GPP). Where possible it will engage in sourcing goods, services or works which can demonstrate reduced environmental impact and minimal harmful effects on wider society. An additional important factor that will be considered is that these goods/services/works must represent both short-term and long-term value for money for the Department and Exchequer.

As an aid to this new departure, the Department will utilise the *Green Procurement Guidance for the Public Sector* as published by the Environmental Protection Agency. This will aid in a number of green criteria endeavours that the Department anticipates embarking upon in 2019/2020, including:

- A feasibility study into sourcing a green vehicle to reduce the Department's reliance on taxis for short-hop deliveries within the city centre.
- Energy Reduction in water usage through waterless urinals, and rainwater reclamation (feasibility study - as part of potential 7-9 deep refit)
- Construction in relation to Ground Source Heating and the feasibility study of deep refit of the 7-9 Merrion Row building
- Food/Catering services
- Cleaning products and Services
- The Department is also considering how it may become involved in events on the wider society/environmental scale. It is investigating the possibility of a collaboration with Trinity College Dublin and the South Dublin Beekeeper Association to introduce bees to the Campus.

Section 7 REAP Review

Subject to any developments in the area of resource efficiencies, the Department of Finance will revisit its REAP no later than 30 June 2020.

Appendix 1: Energy Action Plan

Identify main energy users

Why is it important to know your largest energy users? By identifying your business's largest energy users you can get a better understanding of how your business consumes energy. This is an important first step if your business is trying to reduce its energy consumption, as it highlights the main users. Once you know the big users you can take measures to control them better by turning them down or off when not required. Calculate the energy consumed by main users by metering the equipment or calculating (Energy rating (kW) x hours used = Consumption in kWh).

Set fridges and freezers to operate at optimum temperatures

Heating, ventilation and air conditioning (HVAC) can account for a significant percentage of your energy costs. Manage thermostats and time-clocks to prevent overheating and over-cooling of air temperatures in your business. Reducing set temperatures by 1 oC can reduce total heating costs by up to 10%. Avoid cooling and heating in the same space at the same time.

Train staff to turn off energy using equipment when not in use

Put in place a plan to train staff to turn off equipment when not required (e.g. ovens, fans, air conditioning systems, lighting, PCs etc.). This will help to minimise excessive energy consumption within your business, saving you money. Use signage and checklists to encourage staff to turn off the main energy users when not required.

Appendix 2: Water Action Plan

Undertake the "Overnight Leak Test" and identify potential water leaks

Meter readings should be checked regularly to see if there are any large volumes of water being consumed in areas or at times when there shouldn't be as this may indicate a leak. An easy way to check for any leaks is to perform an "Overnight Test". Take a reading from your water meter before you leave for the night and then take another reading first thing the next morning before any equipment is switched on or used. If there is any difference between the two readings this could indicate a leak in the system. Make sure any leaks identified are fixed immediately as even a small leak can become very expensive over time.

Take measures to reduce flush volumes in toilets and control urinal flushing

Great savings can be made by installing displacement devices in all toilets to save water when flushing. Dual flush cisterns are also recommended to reduce flush volumes even further. If your business has a large number of urinals their flush rate could be greatly reduced by installing devices such as occupancy sensors or timers. Waterless urinals can also be considered for further savings.

Review flow rates and reduce where feasible

Review flow rates in taps, showers, hoses and other water using devices and reduce where possible. Aerators are a cheap and simple way of immediately reducing the flow rate of taps to 3-5 litres per minute.

Consider options for use of rainwater and process water reuse

Rainwater can be harvested from the roofs of building, then stored in tanks and pumped for use in toilets, washing of yards and trucks, and even laundries. As long as there is not a hygiene risk, rainwater and some waste waters from processes can be used to replace expensive potable water.

Appendix 3: Waste Action Plan

Take measures to minimise packaging delivered to your business

Packaging waste generally represents a large percentage of most business's total waste, so it is important to consult with your supplier to see if there is any way they can reduce the amount of packaging supplies are delivered in and to ensure all packaging is recyclable. Ask if it is possible for deliveries to be supplied in reusable crates or other forms of packaging that can be sent back to the supplier. The more packaging you can reduce from your suppliers, the greater the savings in waste management costs. "Try to purchase goods in bulk where possible. This will reduce the amount of packaging generated and the produce should also be cheaper."

Measure and monitor food waste produced and take measures to minimise

Make sure there is a separate, clearly labelled bin for food waste. Collecting food waste separately is a legal requirement, but allows you to see what food wastes you are producing. Sometimes the quantities can be surprising, especially when you consider what food waste is costing your business. "Every tonne of food waste produced can cost a business up to €3,000 when you consider the value of raw materials, energy, and wasted labour, as well as disposal costs."

Train staff on the waste segregation and waste minimisation requirements of your business

Provide staff with training on what waste management procedures are required in your workplace. Use posters or signage to promote awareness on best practice measures. Seek suggestions from staff for improved waste management measures through suggestion schemes, and reward for suggestions adopted

Appendix 4: Management Action Plan

Create Resource Efficiency Metrics for your business

Resource Efficiency Metrics can be generated for any business and are a measure of your business's consumption of resources against the level of activity in your business. This allows you to benchmark your consumption against other businesses in the same sector. For example, the average Irish Hotel uses 300 litres of water per sleeper. Metrics also allow you to monitor improved efficiency in your business over time.

Appoint a member of staff to be the "Resource Efficiency leader"

Appoint a member of staff to be the "Resource Efficiency Leader" and give them authority to identify opportunities for resource efficiency and to develop and implement resource efficiency action plans. This person should be given the support of management (in terms of finance and time). This person should establish a "Resource Efficiency Team" consisting of key staff which may include the general manager, facilities, environmental or maintenance manager, finance manager and other line managers.

Gain third party certification

Gaining third party certification for your business will improve competitiveness, reduce your environmental footprint improve your resource efficiency and ensure the changes you make will remain in place. There are a number of International and national certification programmes which can be adopted.

Consider Green Procurement

When purchasing goods, services, works and utilities your business should consider impacts on the environment, aim to buy locally to reduce transportation costs, and assess the environmental impacts of raw materials etc. Refer to Green Procurement Guidance for Public Sector.

Appendix 5: Resource Efficiency & Cost Saving Recommendations

Action	Officer Responsible	Completion due date
Energy		
Identify main energy users		
Set fridges and freezers to operate at optimum temperatures		
Train staff to turn off energy using equipment when not in use		
Water		
Undertake the "Overnight Leak Test" and identify potential water leaks		
Take measures to reduce flush volumes in toilets and control urinal flushing		
Review flow rates and reduce where feasible		
Consider options for use of rainwater and process water reuse		
Waste		
Take measures to minimise packaging delivered to your business		
Measure and monitor food waste produced and take measures to minimise		
Train staff on the waste segregation and waste minimisation requirements of your business		
Management System		
Create Resource Efficiency Metrics for your business		
Appoint a member of staff to be the "Resource Efficiency leader"		
Gain third party certification		
Consider Green Procurement		