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Aeráide agus Cumarsáide**  
Department of the Environment,  
Climate and Communications

# Resource Efficiency Action Plan Guidance



## Process for preparing and implementing Resource Efficiency Action Plans (REAPs)



## Guide for preparing Resource Efficiency Action Plans (REAPs)



### 1) Ministerial commitment to greening government

The Government has previously publicly committed to greening Government Departments. Each department has already started the process by developing and implementing a Resource Efficiency Action Plan (REAP) for one of its main sites, and in many cases, for more than one site. It is anticipated that in time the REAP process will be subsequently rolled out to all significant sites.

A REAP is a process to improve the sustainability of a department through systematically identifying and implementing a series of actions to increase the efficiency of resource, energy and water use, to prevent/reduce waste, and to address other sustainability issues like green procurement and biodiversity.

This guide provides an outline on how to prepare a REAP and there is an associated REAP reporting template in Excel. A REAP will consist of:

- A set of benchmarks on data for each site that is being included in the REAP. This includes summary information on wastes generated, water used and energy used by each site. For this REAP reporting period, this information will encompass 2019 and 2020.
- A set of resource efficiency actions that are or will be implemented for each site and developed under the categories of 'energy', 'water', 'waste', and 'other' (management, green procurement, resources, staff awareness, biodiversity, etc.).
- Tracking and reporting of the progress and impact of the resource efficiency actions identified in the previous REAP for each site.

Each department has shown management commitment to the process through assigning a person to deal with the development and implementation of the departmental REAP. This should include providing them with the necessary resources in terms of time, support and budget.



### 2) Green team

The green team is the 'champion' to drive, co-ordinate and implement the REAPs at individual department sites. This may require expansion of the existing green/energy team to cover the additional areas of resources, waste and water use under the REAP. An alternative is to establish a separate green team to focus on the management of resources, waste, water and procurement issues (also integrating the key energy actions into the REAP). The role of the green team is to gather relevant data, identify, prioritise and delegate actions, monitor the progress and impact of actions, seek resources, organise internal communication and awareness events, etc.

One of the first tasks of the green team is to communicate the planned greening process to staff. Staff are essential to both implementing improvements as well as identifying potential opportunities in the first place.



### 3) Data gathering & assessment

The green team at each department site needs to:

- Gather the required baseline data for each site and enter into the REAP data template for that site. The REAP report template has more detailed instructions for completing data reporting. The period covered by the current reporting process is 2019 and 2020. It will be beneficial to compare with previous years. While comparing with other sites will be important, internal benchmarking is equally important. The chosen baseline year for the REAP process is 2018; sites that may be reporting for the first time can use 2019 as their baseline year.
- Compare your location's environmental performance relative to environmental benchmarks. Some indicative benchmark values are as follows:
  - o Average domestic water use for offices in general is 5.5 m<sup>3</sup> per employee per year (no canteen), or 8.8 m<sup>3</sup> per employee per year (canteen)<sup>1</sup>. These are the average benchmarks to use for now while further data is gathered under the REAPs process (the average value across 4 different government departments that reported sufficient data in 2018 is 12 m<sup>3</sup> per employee per year).
  - o Average values for total waste amounts for Irish offices is 126 kg total waste per employee per year. Where there are canteens an additional 92 kg per employee per year<sup>2</sup>. These are the average benchmarks to use for now while further data is gathered under the REAPs process (the average value across 8 different government departments that reported sufficient data in 2018 is 127 kg per employee per year).



### 4) Identify Resource Efficiency Opportunities

While the REAPs are to be published at a department level, each department site will need to complete the REAPS process for itself. This includes identifying site-specific opportunities and implementing its own set of actions, for example one site may decide to implement measures to promote biodiversity on its grounds. However, there are also actions that could apply across a whole department for all locations such as, for example, incorporation of greening measures in the procurement of printer services.

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<sup>1</sup> Source: Resource Efficient Scotland, based on a 220 day working year.

<sup>2</sup> Source: EPA waste characterisation report.

The green team at each location can identify potential resource efficiency opportunities by:

1. Completing the on-line assessment [TREE](#), and/or
2. Reviewing the attached opportunity checklist in Annex 1 (including some examples of good actions from various existing departmental REAPs), or
3. Optional - an external resource efficiency assessment to carry out an on-site assessment to identify a number of key potential actions including estimated costs of implementation, annual savings and the payback associated with these options.

An internal review using the online assessment and/or checklist will benefit from a walk-through audit of your site by members of the green team to help identify which potential resource efficiency opportunities are most relevant to your site.

Links for additional information are given in Annex 2 and there are also further information sources available on the REAPs [web page](#).



## 5) Prepare Resource Efficiency Action Plans

The next step is to prioritise a set of resource efficiency actions that will be selected and implemented from the various potential greening opportunities identified. These set of actions need to:

- Ideally consider a number of actions under each of the following areas: waste, water, and energy as well as other areas like green procurement, environmental management, and biodiversity. Actions should be assigned to awareness raising as well as technical measures.
- Consider if an action might be relevant to all sites in the REAP, or it might just be specific to one site.
- Be realistic in terms of the time and resources that are available. However, not every action requires investment; there are often 'low hanging fruit' in terms of low or no cost actions.
- Although some actions may be obvious from the data gathered or any walk through audit completed; others may need further examination in terms of feasibility, cost, etc. It is perfectly fine to include the examination of the feasibility of an option as an action. This may lead to a subsequent implementation action.
- Plan each of your actions - decide who will do what, and assign tasks and responsibilities along with implementation timeframes.
- Think in advance about what success looks like and set realistic targets that progress can be measured against.

The template for recording the selected set of resource efficiency actions for each department site is available [here](#). The REAPs template allows you to indicate whether an action is department wide or just relevant to one site only.

For departments that have already published a REAP, the report on the set of actions for the current reporting period needs to include all of the actions that were originally proposed. A status on these can then be given as to whether the actions are still underway, are completed, or have been abandoned. An approximate timeframe should also be indicated, start month and anticipated end month.



## 6) Implement the selected actions

The actions selected for implementation at the department site should ideally be a mix of technical and awareness-raising. You will need to record before and after the implementation of the actions which could be in the form of gathering before and after data e.g. tap flowrates before fitting aerators or it could even just be before and after photographs e.g. of an office bin set-up.



## 7) Review progress and outcomes and REAP reporting

It is important to regularly monitor and record the progress of implementing the selected resource efficiency actions. The green team should meet periodically to see how the actions are progressing, and to take any steps needed to assist their completion or bring them back on track. This periodic review will also allow the green team to see what actions worked and what didn't to help feed into the action plan for next year.

There needs to be on-going communication with staff about the greening improvements and how they are going. Feedback from staff is crucial to see what is, and what is not working, and what changes might be needed. In addition, staff will often be a source of good ideas for future actions.

In terms of reporting your departmental REAP, the Excel templates for reporting are available [here](#). Some overall comments on the report template are as follows (detailed instructions are given in the template itself):

- If you just have one site, there is a template for a single site REAP. If you have more than one department site completing a REAP there is a reporting template for multiple sites.
- Summary annual data will need to be gathered and reported for each site that is being included in the REAP for 2019 and 2020. This includes data on energy usage, water usage, and waste generated, as well as metrics for benchmarking (staff numbers and floor area).
- Benchmarks are calculated by the template and show *normalised* usage, for example water use in m<sup>3</sup> of water per employee per year. This allows comparison year on year, and across sites, and shows how you perform relative to average values.
- The reporting template will automatically summarise the data from all sites reported.
- Selected actions are to be reported under water, waste, energy & other. When reporting the progress and outcomes of the actions you will need to indicate in the reporting template if they are completed, are underway/ongoing, or are planned, as well as what has been achieved/what has been the impact (e.g. quantities saved, etc.).

## **Annex 1 Opportunity assessment – a checklist for potential things you can do**

The “top 10 opportunities” is followed by a more detailed list by area in a typical office building.

### **Suggested Top Ten Opportunities:**

#### **1. Improve waste segregation**

Ensure that there is a culture of good waste segregation on site with clear guidance to staff on waste types that should be recycled, composted or sent to general waste bins. Good segregation of recyclables and food waste away from general waste is a legal requirement and good for the environment. To assist in this process, engage with colleagues to segregate waste at centralised waste bins and eliminate individual waste bins at desks.

#### **2. Eliminate single use**

While government departments have already been required to eliminate single use plastic including cups, straws, and cutlery, other single use items could also be considered for elimination. This could include sachets for sauces and vinegar, plastic water bottles, paper plates, wooden stirrers, plastic bin liners, etc.

#### **3. Reduce food waste**

Work with canteen staff to quantify food waste and identify changes to reduce amounts arising.

#### **4. Reduce paper use and printing**

Quantify paper use and printing quantities by each office area and take steps to minimise paper consumption through for example, centralised printing management, default to double-sided, staff awareness measures, etc.

#### **5. Identify and fix water leaks**

Put an active process in place to identify water leaks. This can include monitoring water consumption on a weekly basis and regular maintenance of water users such as taps and toilets.

#### **6. Reduce water consumption in urinals, taps and toilets**

The main water use in an office building is in toilet facilities. Take measures to reduce water consumption in urinals, taps and toilets.

#### **7. Install LED lighting**

LED lighting reduces electricity consumption, requires little maintenance, costs less to run, and reduces greenhouse gas emissions. As a minimum, carry out a lighting retrofit assessment to review return on investment.

#### **8. Travel**

Survey staff and gather metrics on commuting habits; gather metrics on air, road, and public transport for staff travel.

#### **9. Awareness raising**

Carry out awareness raising activities on resource efficiency for staff through competitions, the staff intranet, seminars, surveys, green days, lunch-time talks, on-line talks, etc.

#### **10. Greening meetings and events**

Beyond COVID-19, consider continuing on-line meetings and events, where possible. Set greening requirements for any future physical events.

## Opportunities by area

A walk through audit of your building or location can help identify what is relevant and show the actual situation on the ground. A checklist of potential resource efficiency opportunities for a typical office building is set out according to the following areas:

- Facilities – waste
- Facilities - water
- Facilities - energy
- Offices
- Restaurants and canteens
- Transport
- Procurement
- Contract cleaning
- Landscaping

Within each of these, potential opportunities for waste, water, energy, and resources are set out.

### Facilities – waste

Measures that can be taken to improve waste management in a building include:

- If food is served to staff on site, ensure that there is a food waste (brown bin) collection service.
- Ensure that there is a culture of good waste segregation on site with clear guidance to employees on waste types that should be recycled, composted or sent to general waste bins.
- Get information back from waste contractors on tonnes of each waste stream collected.
- Appropriately manage, store, and dispose of hazardous waste.
- Provide collection receptacles for batteries and provide separate storage for WEEE generated on-site, both hazardous items such as fluorescent tubes, and non-hazardous WEEE.
- Look to replace any hazardous substances that are in use at the site, where feasible.

*Some good examples identified for waste from existing departmental REAPs:*

- Replace single waste bins in the canteen and kitchenettes with segregated bins for organic waste, recycling and general waste.
- Install batteries and fluorescent light recycling boxes.

### Facilities – water

Measures that can be taken to improve water management in a building include:

- Fit occupancy sensors on urinals, where present.
- Identify water saving measures like aerators for taps. Start with the busier toilets.
- Fit displacement devices for toilet cisterns, where they are single flush only.
- Put an active process in place to identify water leaks. This can include monitoring water consumption on a weekly basis and regular maintenance of water users such as taps and toilets.
- Consider installing a rainwater harvesting system and use rainwater for toilets, grounds and fleet washing, if relevant.

*Some good examples identified for water from existing departmental REAPs:*

- Investigate the possibility of checking for water leaks in the building through an overnight leak test. The 2018 water usage per person is approximately double the benchmark average for office buildings.
- Investigate replacing 'fill and flush' urinal system with PIR motion sensors or dry urinals.
- Reduce water flowrates in office showers, toilet taps and wash hand basins.
- Investigate the harvesting of rain and grey water for use in the toilet facilities.
- Purchase the least water intensive toilet facilities in conjunction with central procurement.

## **Offices**

Measures that can be taken to improve the sustainability of offices include:

- Quantify paper use and printing quantities by each office area and take steps to minimise paper consumption by:
  - Having a managed printing service
  - Encourage employees to print only when necessary
  - Use double-sided copying as the default setting on printers
  - Monitoring copies printed per employee.
- Provide recycling stations in offices for paper and other recyclable waste.
- Eliminate individual waste bins at employee desks. Request employees to segregate waste at centralised waste bins.
- Promote the use of ceramic cups and reusable cups through working with the canteen/café to offer discounts, providing cup washing stations where needed, and creating awareness and buy-in through staff surveys/competitions.
- Encourage tap water access and the use of reusable water bottles through provision of mains-fed water coolers and creating awareness and buy-in through staff surveys/competitions.
- Ensure cleaning contractors are trained regularly on waste segregation requirements.
- Purchase 100% post-consumer recycled paper.
- Allow for the reuse of furniture and office equipment within offices, between offices, and between departments.

*Some good examples in relation to offices from existing REAPs:*

- Analyse paper usage and identifying actions to reduce paper consumption.
- Centralised recycling stations.
- Consider all the environmental and sustainability suggestions submitted through the IDEAS Bank and ideation events.
- All printing is double-sided as default.

## **Restaurants and canteens**

Where there is a restaurant or canteen, guide caterers to take steps in relation to sustainability, including for example:

- Take measures to prevent food waste when purchasing, preparing and serving food and monitor food waste benchmarks. Identify main sources of food waste and implement changes to reduce amounts.
- Use and advertise discounts for using ceramic or reusable coffee cups / or charge for use of disposable/compostable cups.
- Promote vegetarian options and consider a Meat Free Monday.
- Offer a 'healthy me – healthy planet' option using local food, seasonal food, correct portions, etc.
- Use environmentally friendly cleaning products.
- Minimise or eliminate single use items like stirrers, cups, etc.
- Use refillable condiment containers for items like sugar, sauces, vinegar, etc.
- Encourage/promote tap water access.
- Operate dishwashers efficiently, by using when full and turning off when not required.
- Ensure food waste bins are provided in canteens and office kitchenettes where food is consumed.

When catering contracts are up for review, include sustainability measures, such as those above.

*Some good examples in relation to restaurants/canteens from existing REAPs:*

- Working with the canteen contractor and other suppliers to eliminate the use of single-use in the building.
- Incorporate greening requirements into canteen tender specifications.
- Price reduction when staff use reusable cups.
- Reusable keep cups and water bottles policy implemented and provided to all staff.
- Replacement of single waste bins in the canteen and kitchenettes with segregated bins for organic waste, recycling and general waste.

## **Contract Cleaning**

When cleaning contracts are up for review include sustainability measures, such as those outlined below.

Encourage contract cleaners to:

- Use environmentally friendly cleaning products.
- Request cleaning staff to reuse bin liners numerous times or use reusable bins liners made from durable material such as cloth. These types of liners are most suitable for clean recyclable materials.
- Reuse bin liners numerous times when liners are clean.
- Report water leaks in bathrooms to facilities management.
- Turn off lights when leaving the building.

- Train their staff regularly.

## Landscaping

When landscaping contracts are up for review include sustainability measures, such as those outlined below.

Encourage landscaping contractors to:

- Adopt one or more of the measures for landscapers from the [national pollinator plan](#), e.g. pollinator friendly mowing, etc.
- Minimise water used for grounds maintenance and use rainwater or ground water where available.

*Some good examples in relation to landscaping from existing REAPs:*

- Identify and incorporate a number of actions under the All-Ireland Pollinator Plan in grounds management.
- Include where possible, the requirement for a Sustainable Urban Drainage System (SuDS) for the upgrade of car parks.

## Venue hiring

Set greening requirements for any future events, meetings, seminars, etc. See [a guide to running green meetings and events from Failte Ireland](#).

## Transport

Transport may be a key element of your department's working activities or may be limited to the impact associated with staff travel. Some actions which can improve the environmental aspects of transport include:

- Continue to consider whether remote working and the use of on-line meetings can be facilitated.
- Consider electric vehicles when renewing vehicles for departmental activities.
- Gather metrics on air, road, and public transport for staff travel.
- Provide/promote bike parking racks and staff shower facilities.
- Promote car-sharing websites, give parking preference to car sharing.
- Investigate the provision of electric car charging points.
- Survey staff and gather metrics on commuting habits.

*Some good examples in relation to transport from existing REAPs:*

- Prioritise EVs where possible when renewing the Department's vehicle fleet.
- Installing electric car charging points.
- Develop a policy and procedures for offsetting the emissions associated with official air travel.
- Quantifying carbon emissions associated with all staff travel.

## Procurement

Some actions in relation to green procurement are outlined under other headings above. Additional guidance on greening procurement can be found in the EPA's [Green Procurement – Guidance for the public sector](#).

*Some good examples in relation to green procurement from existing REAPs:*

- Review existing catering contracts and identify opportunities to reduce plastics and unnecessary waste and improve environmental factor. Standards to be identified for current and potential contracts.
- Examine the purchase and disposal of all equipment, associated consumables, ICT items and mobile phones.
- Implement best practice in green procurement and sustainable procurement across the department.
- Ecolabel printing paper in use.

## Facilities - Energy

Work on energy efficiency is already well underway under the public sector energy efficiency programme. You can simply repeat the actions that are underway in that programme for the REAP. If there is no such programme underway in your building, some suggestions are included in the on-line [TREE](#).

*Some good examples in relation to energy from existing REAPs:*

- Optimising settings of building management systems (BMS) - improvements to the scheduling and a reduction in the run hours of the heating/ventilation and air conditioning system.
- Historical lighting which includes T8s and T5s replaced by LED energy efficient lighting, where possible.
- Extensive use of occupancy/motion PIR sensors for lighting in common areas.
- Installation of insulation.

## Annex 2

### Links for further information

The following are some additional sources of information that are useful for drawing up and implementing a REAP:

- The [REAPs page](#) on the Gov.ie website.
- EPA's [Green Procurement – Guidance for the public sector](#)
- [Green Business 50 tips for greening your office space](#)
- [SEAI SME Guide to energy efficiency](#)
- [Failte Ireland Guide for greening events](#)
- [Water Efficiency – a best practice guide for Irish healthcare facilities](#) (much of this guide is also applicable to offices)