DoF Office Estate

Energy Efficiency/Carbon Reduction Plan

FY20/21 – FY22/23

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EXECUTIVE SUMMARY

At the time of drafting this plan the country is dealing with the COVID-19 emergency. A number of buildings in the estate have been or are closed, others are working with reduced staffing to maintain essential public services, while a significant number of staff are working from home. On first observation, energy savings might be anticipated, as buildings will be working at reduced capacity, however, current COVID19 mitigation measures include running existing ventilation in buildings continuously, which will inevitably increase electricity consumption. The full impact of the COVID-19 pandemic on energy consumption during 2020/21 and perhaps in future financial years will become apparent only when the corresponding energy data is interrogated.

This document defines the actions and investments that the Department of Finance's Properties Division plans to undertake over the 3 year period from 2020/21 to 2022/23 to continue to improve the energy efficiency across the Civil Service Office Estate. It follows on from three previous 3 year plans covering cumulatively the period from 2011/12 to 2019/20.

During the period of the last 3 year plan covering 2017/18-2019/20, actual savings of 1.7% were achieved in the first year with 4.7% by the end of the second and 5% in the third**.** This has resulted in annual energy unit savings of 3.5GWh, with a cost saving of an estimated £500k[1].

During the lifetime of this latest plan, it is not anticipated that the size of the DoF PD Office Estate will change significantly. The programme to transfer additional buildings into the Office Estate, under the Reform of Property Management (RPM) Programme / Asset Management Strategy, noted in the 2017/8 – 2019/20 Energy Efficiency Plan, did not progress. The rationalisation of the Office Estate, however, did and will continue, along with the relocation of Arm's Length Bodies into Office Estates buildings, where practicable. The roll-out of agile working in the Civil Service, again under the Reform of Property Management programme, will accelerate given the prevailing circumstances of the unprecedented need to work remotely, and may ultimately lead to further reductions in the size of the Office Estate but this seems unlikely to have a significant impact in the term of the 2020/21 – 2022/23 Energy Efficiency Plan, although there are currently a great number of unknowns.

The ethos of previous plans is continued into this plan by utilising the three proven mechanisms to achieve further reductions, noted below. Targets for the 2020/21 – 2022/23 plan have been set following analysis of current energy usage, including the previous energy reduction measures already in place and taking into account the capital funds currently predicted as being available for investment in energy efficiency measures and equipment.

Projected savings from the 2019/20 baseline have been identified under the following headings:

- Reduction in the footprint of the office estate (excepting buildings transferred in, purchased or leased under the RPM programme);
- Capital investments in energy efficiency; and
- Behavioural change (in staff occupying buildings).

Table 1 summarises the projected savings under each of these themes.

Heading	Para	Action	Energy savings
Reduction in the footprint of the office estate.	2.1	Consolidation of space in the office estate.	1%
Capital investments in energy efficiency measures and equipment.	2.2	Identify and implement energy saving projects.	2%
Behavioural change in staff occupying the office estate.	2.3	Encourage and support Departmental Energy Managers in order to motivate staff behavioural change.	1%
		Total	4%

Table 1. Summary of Action Plan

It is projected that a further 4% energy saving can be realised by the successful implementation of the 2020/21 - 22/23 plan. DoF PD will report on progress against each of the targets on an annual basis, after receipt of verified consumption data from Departments has been received, with analysis being completed around November, each year.

[1] Based on energy figures for 2019/20.

INTRODUCTION

The Department of Finance Properties Division (DoF PD) is responsible for managing the Northern Ireland Civil Service (NICS) Office Estate. For the purposes of this report, as at 01 April 2020, the office estate consists of 104 holdings/sites, located across Northern Ireland, equating to 308,081 m^2 net internal area (NIA)[1], with an estimated annual energy consumption of 66GWh (2019/20). This document details the updated DoF Energy Efficiency and Carbon Reduction Plan, outlining specific energy usage reduction targets for the office estate over the three year period from 2020/21 to 2022/23.

Energy Performance will be affected by a wide range of factors including the design and fabric of a building, its construction materials and components; the condition of the heating, cooling, ventilation and lighting equipment and appliances; the number and behaviours of people using the building, including the services, equipment and transactions required to deliver business; and even local climate and exposure to wind, rain and sun can have an impact.

A successful plan will involve everyone in the PD Office Estate and should look at:

- reducing energy use and avoiding waste (e.g. through lights and equipment left on unnecessarily);
- utilising energy-using systems efficiently, turning off or down equipment when not needed;
- increasing efficiency in building services such as heating, hot water supply and lighting, and in individual equipment such as computers and IT devices;
- enhancing thermal efficiency by carrying out regular maintenance and considering controls for heating and other systems; and
- using lower carbon energy supplies, where possible switching to lower emission sources or selecting lower-carbon supplies.

(All references to the 'office estate' are to the estate managed by DoF PD)

Background

1. Northern Ireland Strategy

The Department of Agriculture, Environment and Rural Affairs is responsible for Sustainable Development in Northern Ireland. The principles of sustainable development have been integrated into the work of all Departments and District Councils through the draft Programme for Government (PfG) and the NICS Outcomes Delivery Plan. A mapping exercise has been carried out to highlight how the PfG Outcomes Delivery Plan aligns with the United Nations Sustainable Development Goals (SDGs). The draft PfG includes: Delivery Plan (indicator 29) Greenhouse Gas Emission, Outcome 2 "We live and work sustainably - protecting the environment". Relevant implementation actions for DfC/DoF, as key delivery partners, are: *All Government Departments are to work to reduce waste, increase recycling, improve energy and heating efficiencies and increase usage of renewable technologies across the NICS estate*.

Major legislative and non-legislative measures relevant to carbon/energy reduction targets for the UK Central Government Estate flow from the transposition of Articles 5 and 24 of the 2012 Energy Efficiency Directive (EED). Article 5 sets an energy target while Article 24 sets an obligation to report on

progress achieved towards national energy efficiency targets by way of a National Energy Efficiency Action Plan (NEEAP) and an annual UK progress report

Article 5 only applies to buildings owned and occupied by central government, rented buildings are excluded.

The DoF Energy Efficiency/Carbon Reduction Plan sets out DoF's actions which contribute to the achievement of the priorities and strategic objectives noted above.

This plan may also be used to contribute to the Energy Efficiency (Eligible Buildings) Regulations 2013 No 3220, under the commitment for public bodies to develop energy efficiency plans which include specific actions.

1.1 Energy Cost

Table 2 below provides a summary of the energy consumption and energy costs, over the three year period from 2017/18 to 2019/20 in the office estate.

Table 2. Summary of total energy consumption and cost.

	Base Year							
	2016/17		2017/18		2018/19		2019/20	
Electricity	30.7GWh	£3M	29.3Gwh	£3.1M	28.1Gwh	£3.2M	25.6GWh	£3M
Natural Gas	34Gwh	£1.2M	34.3Gwh	£1.3M	34.3Gwh	£1.3M	35.5GWh	£1.5M
Heating oil	4.6Gwh	£0.2M	3.5Gwh	£0.2M	2.1Gwh	£0.1M	3GWh	£0.2M
TOTAL	69.3Gwh	£4.4M	67.1Gwh	£4.6M	64.5Gwh	£4.6M	64.1GWh	£4.7M

The energy consumption figures above are weather corrected to the baseline year 2016/17, whereas the cost is actual. Overall energy consumption has reduced over the period of the 2017/18 to 2019/20 plan, although what is not immediately apparent from the above table is that this drop in consumption over the three year period has helped to largely offset the effect of rising energy costs to occupying departments.

1.2 Reduction Incentive

Having run from 2010 to 2019, the Carbon Reduction Commitment Energy Efficiency Scheme (CRC) has now been withdrawn. This mandatory scheme for energy consumers over 3GWh was designed to encourage businesses to consume energy more efficiently through the purchase of allowances, which were then surrendered. There is no replacement for the scheme per se, however the Climate Change Levy chargeable on each kWh of electricity and natural gas was increased to coincide with the scheme being withdrawn. It is difficult to separate the climate change levy from the unit cost of electricity with respect to being an incentive, however, energy intensive industry sectors have the EU emissions trading system (EU ETS) which is a cornerstone of the EU's policy to combat climate change and its key tool for reducing greenhouse gas emissions cost-effectively. Participants in the EU ETS receive discount on the Climate Change Levy. This trading scheme is not available to the Office Estate.

In conjunction with 'best value for money' energy contract procurement and by identifying actions and achieving energy efficiency targets, this plan aims to provide DoF and the departments occupying the office estate with mitigation planning, aimed at reducing energy costs.

1.3 Energy Consumption in the Office Environment

Details of the annual energy consumption split of a standard office building in 2014/15 are displayed graphically in the pie chart in Figure 1, below. As can be seen, heating accounts for 34% of energy consumption and is therefore a major focus in energy saving measures. Heating is generally supplied via natural gas or heating oil with the remaining consumption being electricity. In relation to ICT equipment, in 2013, the NICS began a project to move servers from main departmental buildings to Data Centres. The vast majority of departmental servers were migrated by autumn 2013, with the remaining DAERA servers moved in early 2015. As a result, electricity consumption in respect of operating such equipment no longer falls under the NICS office environment.

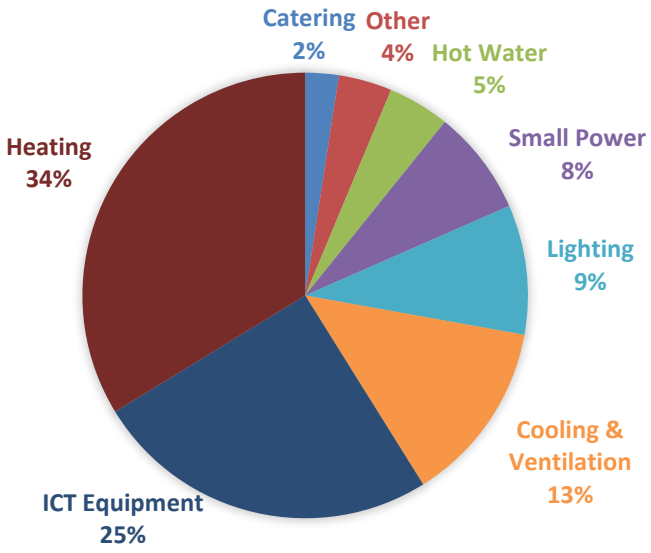

Figure 1. Breakdown of annual energy consumption in office buildings by end use, extrapolated from *Carbon Trust Maximising Energy Savings in an Office Environment Guide CTV007* .

2. TARGET AREAS FOR IMPROVED ENERGY EFFICIENCY

Many people think that older and less energy efficient buildings, the predominant type on the office estate, are not energy-efficient and only radical upgrades will improve their performance. The reality is more complicated and the energy and carbon performance can often be improved, albeit a realistic assessment of what is possible is important. Striking the right balance between costs, benefits and even unintended consequences, requires consideration of all the factors that affect energy use to devise a strategy relevant to each property.

Three primary mechanisms have been identified by which energy consumption can be reduced across the PD office estate:

- Reduction in the footprint of the office estate;
- Capital investments in energy efficiency measures and equipment; and
- Behavioural change of staff occupying the estate.

Details of planned actions under each of the above headings are given in subsequent sections with a summary of planned actions at section 4.

2.1 Reduce the Footprint of the Office Estate

DoF PD will seek to achieve a consolidation of space in the office estate through strategic workplace planning. Where capital is available, DoF PD will seek to provide office workspace in individual buildings to a standard m^2 per workstation [2]. The overall average Net Internal Area (NIA) per workstation will vary per building dependant on floor plates, distribution of columns, services, etc. Until the NICS Recovery Plan has been finalised, which aims to maximise how the NICS delivers its key business functions and services, both now and into the future, while prioritising the safety of staff and customers, it is expected that all new and substantially refurbished buildings will achieve or better a target of 10m² per workstation.

Although an increase in the number of staff per m^2 will result in an increase in energy (kWh) per m^2 for that area (as more energy is required for equipment e.g. computers and to cool each building due to the higher density of staff), it is anticipated that implementation of this strategy will result in an overall net reduction in energy consumption per workstation across the office estate.

Within the current office estate it is assumed that an energy saving of 85% will be realised from a building which is no longer in use. The remaining 15% will appear as an increase in energy usage in the existing building(s) to which displaced staff are relocated. Energy data accumulated over the lifetime of the previous plan has shown that these assumptions are reasonable.

[2] Extract from Standard Central Government Accommodation Standards V1 28/02/19 - The overall average Net Internal Area (NIA) per workstation will vary per building dependant on the existing floor plates, distribution of columns, services, etc. However, it is expected that all new and substantially refurbished buildings will achieve or better a target 10m² per workstation.

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It has also been assumed that a new or substantially refurbished building will consume energy at a rate of 236 kWh/m^2. This figure is based on the BRE Good Practice Guide (286 - Energy Performance in the Government's Civil Estate) benchmark for natural ventilation, open plan office accommodation.

The office estate could be viewed as entering a rationalised steady state with fewer opportunities available to reduce the size of the estate with the current office based workforce. Any vacation of further office space will be based on business need in line with departments' future accommodation strategies and Standard Central Government Accommodation Standards.

An analysis of the buildings which are likely to be exited over the next 3 years has been carried out. Whilst details have yet to be finalised, the total area to be reduced over the 3 year period is likely to be 10,283 m^2 (NIA), over 3 owned and 2 leased buildings. Using the above assumptions, this should produce kWh savings over the next 3 years as shown in Table 3 below:

Year 1, kWh reduction (2020-21)	Year 2 , kWh reduction (2021-22)	Year 3 , kWh reduction (2022-23)
113,107	**248,856**	**863,154**

Table 3. Estimated energy reduction across the office estate by year.

There are plans to vacate the Tower building located within the Rathgael site and move staff to an existing building within the site, however, the future of the Tower building itself isn't clear at this time.

Taking the above into account, it is anticipated that overall, the reduction in the office estate area should result in a projected energy saving of just over 1% over the 3 years of this plan.

2.1.1 Fit Out Procurement of new buildings and refurbishments

This strategy applies to all new building procurement specifications and refurbishment of existing buildings. DoF PD uses DoF Construction and Procurement Delivery (CPD) as a Centre of Procurement Excellence (CoPE) when fitting out new buildings or to oversee projects involving developer fit-outs. Full specifications are provided for each individual project, which includes the requirement that all new or refurbished DoF PD buildings undergo BRE Environmental Assessment Method (BREEAM) assessment. It is DoF policy that all new buildings achieve an 'excellent' rating and all refurbished buildings achieve at least 'very good' in this assessment, unless site constraints or project objectives mean that this requirement conflicts with the obligation to achieve value for money. Where an alternative environmental assessment methodology is used, projects will achieve equivalent ratings.

2.2 Capital Investments

Capital investment in energy reduction technologies is assessed on an *invest to save* basis. As the office estate develops / improves and energy inefficiency is addressed, investment opportunities which fall within the industry accepted five year payback will reduce. Thus in order to identify targets and meet expectations, investments which fall outside five years will still be considered, based on the lifetime of the equipment and in line with the strategy for the DoF estate.

Where opportunities are identified, appropriate trials will be completed in order to demonstrate value for money from the capital invested.

If trials prove successful and, where budget permits, consideration will be given to installations at other locations. DoF's ability to implement projects will be informed by budget and resource constraints.

Opportunities for financial assistance through grants and other incentives will be considered, where available.

As in the 2017/18 -19/20 Plan, projects will continue to be identified from comprehensive energy surveys, completed in the buildings identified as having large energy consumption, in order to maximise energy reduction opportunities relative to the consumption of the entire office estate. An overarching *invest to save* approach will continue to be adopted when implementing recommendations.

While recognising that investment in energy saving technology will contribute to reductions in energy consumption of individual buildings, the potential for savings may be limited by the fact that a significant number of energy saving projects have already been completed, including those carried out under the three preceding plans.

These include:

- Lighting control through motion sensors;
- Timer controls to reduce out of hours operation;
- Large scale replacement of inefficient lighting with compact fluorescent lights;
- Installation of plate heat exchangers;
- Upgrading insulation;
- Replacing existing motors for variable speed motors; and
- Installation of energy efficient lighting.
- Reconfiguring boiler houses;
- Installation of energy efficient boilers, building energy management systems, efficient pumps and decentralising domestic hot water heating.

Investment in existing buildings will only proceed if the building in question is identified in the DoF Property Asset Management Plan as being part of the office estate in the medium to longer term and the payback period shows the investment to be cost effective.

It is anticipated that the main capital investments will be identified from recommendations detailed in the latest energy surveys and cyclical maintenance observations. This should result in a projected energy saving of 2% over 3 years.

The following main headings encapsulate the frequently targeted areas for capital investment.

2.2.1 Heating Installations

Changes in legislation and increasing fuel costs have led manufacturers to develop more energy efficient boilers than previously available. Over the last four years, 26 boiler houses were refurbished, 7 of which were converted to natural gas. Where appropriate, pumps were updated to inverter controlled and building management system strategies were reconfigured and updated accordingly. DoF PD will continue to monitor the remaining boilers and at the point where a boiler requires replacement on grounds of age or failure, an assessment will be made as to the most appropriate fuel source of the replacement boiler. When appropriate and in order to reduce energy consumption, replacement boilers will be high efficiency and accurately sized in accordance with the system / structural data available. Consideration may be given to higher specification boilers / technologies based on life cycle costs and the choices of fuel available.

Opportunities may also arise in the future with the proposed expansion of the natural gas infrastructure in the west of the region.

2.2.2 Lighting

Ongoing development of energy efficient lighting has resulted in a steady reduction in the initial capital cost of this technology. DoF PD has installed light emitting diode (LED) technology in refurbishments, new building specifications and during replacement of existing lighting at point of failure. DoF PD will continue to assess the opportunities available through energy efficient lighting and seek to identify opportunities to upgrade existing lighting installations and where feasible, lighting layouts will be redesigned and replaced by more efficient fittings.

The industry currently indicates that LED technology can attract a payback of 3-5 years when replacing compact fluorescent fittings. These savings can be achieved as more energy efficient lighting technology uses around half the energy of fluorescent fittings and has a longer life span. Payback periods increase where ceiling grids have to be reconfigured when new light fittings do not have the same lighting characteristics as existing fittings.

Consideration will also be given to more expensive energy efficient technology, based on payback. Replacement lighting encompasses fittings, controls and emergency lighting.

During refurbishments, local light switching will be installed allowing occupiers to override automatic lighting which has failed and remains on.

2.2.3 Cooling

Over the last four years, 4 buildings have had chiller plant replaced. Chiller plant is normally replaced due to frequent breakdowns, leaving the plant not economically viable to repair. Similar to other plant, technology has moved on rapidly over the last number of years meaning that new plant is more energy efficient and more closely controlled than its predecessor.

2.2.4 Voltage Optimisation

Twenty three buildings in the estate have had voltage optimisation technology installed during the first Energy Efficiency reduction plan (2011/12 – 2013/14).

It is anticipated that future potential projects will attract a longer payback for this type of technology as the majority of the buildings with large energy usage within the portfolio have now already had this technology installed. New acquisitions to the office estate and refurbishments in the existing estate will have voltage optimisation included in the associated specifications, as appropriate.

DoF PD will continue with further installations where opportunities arise.

2.2.5 Other Potential Capital Investments

DoF PD will consider other potential capital investments over the 2020/21 - 2022/23 which may arise through projects originating out of the following:

Energy Performance of Buildings (2002/91/EC) (EPB)

DoF PD will utilise energy performance data and recommendations made available through compliance with the Energy Performance of Buildings (EPB) EU directive.

Display Energy Certificates (DECs) and Benchmarking

Buildings within the office estate over 250 m^2 in size with frequent public access will have DECs lodged annually and advisory reports lodged every seven years.

DECs have six distinct rating levels ranging from A to G. Currently, DoF PD aims for all DEC ratings to be a D or better.

A DEC advisory report contains a range of cost-effective measures that may be implemented to improve the energy performance of the building, such as recommendations to carry out lighting, glazing and insulation surveys. Where applicable the report also includes zero and low-cost operational and management improvements, possible upgrades to the building fabric or services, and opportunities for the installation of low and zero carbon technologies.

Recommendations are categorised as:

- immediate implementation;
- low and no cost interventions;

- high cost with short payback; and,
- not feasible.

Table 4 below shows the office estate DEC ratings over the last three years, 2017/18 - 2019/20. This data suggests that there will be less potential for improvement through investment in energy efficiency measures in the office estate were DEC's have been lodged.

DEC Rating	Performance	Year		
		2017/18	2018/19	2019/20
A – D	Good-Typical	87%	91%	89%
E – G	Poor	13%	9%	11%

Table 4. Three Year DEC Ratings by % for office estate buildings over 250 m^2 gross internal area.

Air-conditioning Inspection Reports

All DoF PD buildings with air-conditioning systems with an effective rated output of 12 kW or more are in the process of being inspected for efficiency and sizing, compared to the cooling requirements for the building. The associated inspection report also includes recommendations on possible improvement or replacement of the system.

Reports will be reviewed by engineers in order to act on the advice and key recommendations in the inspection report and rectifying faults or making appropriate improvements where this is beneficial, cost effective and will contribute to the efficient running of the air conditioning system. In most cases Improvements will contribute to a reduction in carbon emissions and reduce the operating costs. In extreme cases the replacement of the existing system will be considered.

Trialling new energy efficient technologies

DoF PD will continue to engage with suppliers of new innovative energy efficiency technologies through attendance at seminars and energy-related trade shows. Technologies will only be assessed where there is sufficient evidence that they have been successful at existing installations and where there is minimal cost to DoF PD in trialling the equipment.

Following trials, if technologies prove to be successful, installation into existing suitable buildings and consideration for inclusion in new building specifications will be assessed on a site by site, one to one basis where financial constraints allow.

Investment in Low and Zero Carbon Technologies (LZCT)

LZCT typically include biomass, solar thermal (ST), photo-voltaic (PV), geothermal technology and wind turbines. Investment in LZCT will only be considered by DoF after more cost-effective investments have been installed in areas such as building fabric, ventilation and lighting.

It should be noted that the introduction of some of the LZCT will not necessarily reduce the amount of energy consumed, in some cases it may actually increase it, however, it will displace the use of more carbon intensive sources.

Existing DoF PD Buildings which have renewable installations are listed in Table 5.

		Photo Voltaic (PV)	Biomass Boiler
1	Academy House. BALLYMENA	X	X
2	Ballykelly House, BALLYKELLY	X	X
3	Clare House. BELFAST	X	
4	Colby House. BELFAST	X	
5	Corporation Street TELB. BELFAST	X	
6	DAERA, Molesworth Plaza. COOKSTOWN	X	
7	HSE Ladas Drive, BELFAST	X	
8	Stormont Stables. BELFAST		X
9	Rivers Agency, Loughry College. COOKSTOWN	X	
10	Inishkeen House. ENNISKILLEN		X
11	Glenree House. NEWRY	X	

Table 5. Buildings with renewable installations.

2.3 Behavioural change of staff occupying the Office Estate

Over the lifetime of the previous plan there has been a noticeable improvement in direct involvement by departments in stimulating the positive behavioural change of their staff who occupy PD buildings. All departments now have designated Energy Managers. Throughout the lifetime of this new plan, DoF PD will continue to chair the Interdepartmental Energy Managers forum in order to continue to promote the drive to reduce energy consumption at a building level and to communicate achievements in the office estate. This forum also provides an interface for eEnergy Managers to network and share knowledge and experience of energy reduction measures initiated within other buildings outside the office estate. During the last plan, DoF PD saw a significant increase in correspondence from Energy Managers about occupier identified energy saving opportunities within the office estate. This plan aims to build on what has been achieved over the past three years, by reinforcing the need for and promoting positive behavioural change.

2.3.1 Ethos

Changing the behaviour of staff occupying the office estate can play an important part in reducing energy usage within a building. This can be achieved by ensuring that timely and relevant information is fed back to staff on energy usage. The Carbon Trust has suggested that by encouraging good 'housekeeping', implementing metering / targeting, encouraging behavioural change and training building Energy Managers and staff occupying a building, up to a 5% energy reduction can be achieved, depending on existing practices. DoF PD will continue to actively promote these energy efficiency recommendations.

2.3.2 **Housekeeping and metering/ targeting**.

DoF PD is investigating the installation of a new automatic metering and targeting systems to collect the energy usage data from the larger buildings in the office estate.

The energy management software will provide the facility for Departmental Energy Managers to record and manage energy usage efficiently across the buildings for which they are responsible. It will also allow the Energy Managers and DoF PD to target high energy users, report on energy performance and identify where exceptions occur. Energy consumption data is shared with Energy Managers, including information on how their building/s compares with other buildings within the office estate.

DoF PD will continue the Departmental Energy Manager meetings, in order to raise the profile of energy efficiency and to transfer the knowledge required to assist in changing staff behaviour throughout the office estate and thus work towards achieving the projected reductions in energy usage.

It should, however, be noted that, although staff are more aware of energy matters in the office estate, this level of awareness and buy-in has to be maintained to continue to achieve improved efficiency savings. Nevertheless, overall, it is anticipated that behavioural change in staff occupying the office estate should result in a projected energy saving of 1% over 3 years.

3.0 MONITORING AND REPORTING

Progress against the projected savings will be continually monitored throughout the lifetime of this 3-year plan and progress will be reported on an annual basis. Analysis of data should be completed within 6 months of the end of the financial year i.e. by end of November of the following financial year.

Where possible, performance data will be presented at a level that will allow the relative performance of different Departments to be identified. This should enable areas of good practice to be encouraged and areas where further work is required to be targeted. As with previous reports, the annual report will be shared with NI Audit Office and published on the NICS Intranet.

4.0 SUMMARY OF PLANNED ACTIONS

In summary, the total reduction in energy usage anticipated over the three years 2020/21 - 2022/23 is estimated to be in the region of 4% of the energy consumption of 2019/20, a breakdown of the actions is shown below.

Heading	**Para**	**Action**	**Energy savings over 3 years**
Reduction in the footprint of the office estate.	2.1	Consolidation of space in the office estate.	1%
Capital investments in energy efficiency measures and equipment.	2.2	Identify and implement energy saving projects.	2%
Behavioural change in staff occupying the office estate.	2.3	Encourage and support Departmental Energy Managers in order to motivate staff behavioural change.	1%
		Total	4%

Note that the savings referred to, are in relation to the estate as of 1st April 2020

REFERENCES

Asset Management Strategy - http://sibni.org/project/asset-management-strategy/

The Executive Office, Programme for Government - https://www.executiveoffice-ni.gov.uk/publications/outcomes-delivery-plan-201819

BRE Good Practice Guide (286 - Energy Performance in the Government's Civil Estate) - http://projects.bre.co.uk/gpg286/

Display Energy Certificates (DECs) - https://www.finance-ni.gov.uk/articles/display-energy-certificates

BRE Environmental Assessment Method (BREEAM) - http://www.breeam.org/

The Carbon Trust Office Energy Efficiency Guides - https://www.carbontrust.com/resources/office-energy-efficiency-guides