

CA EED Irish study visit

Day 1 - 1st December 2020



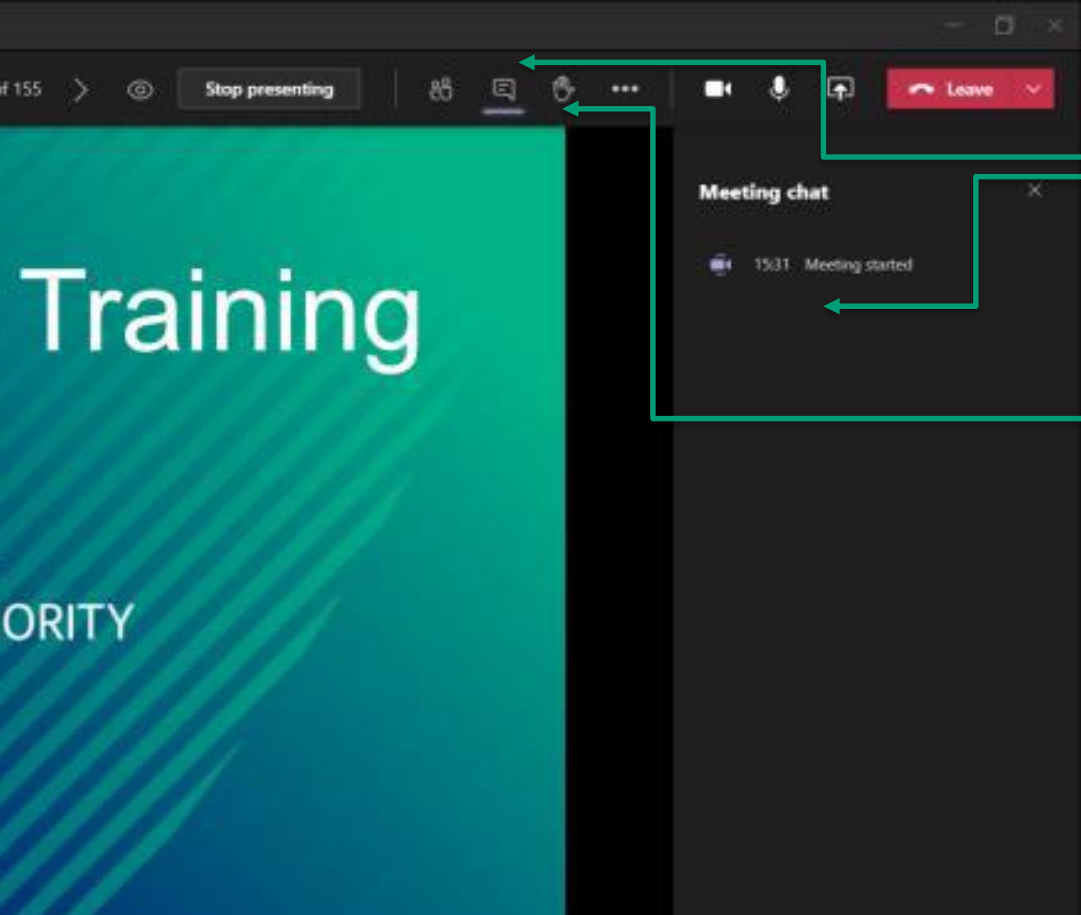
Rialtas na hÉireann
Government of Ireland

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ENERGY AUTHORITY
OF IRELAND

Day 1, 1 st December 2020 – Policy context and governance structures; financing planning; SEAI energy supports; central government and government department experience			
10:00 GMT times	<p>Matt Colins Assistant Secretary General Department of Environment, Climate and Communications</p> <p>Kevin Brady Principal Officer Department of Environment, Climate and Communications</p> <p>Ken Cleary Assistant Principal Officer Department of Public Expenditure & Reform</p> <p>Eavan Crehan Senior Corporate Finance Officer New Era, National Treasury Management Agency</p>	<p>Welcome</p> <p>The Irish policy context – public sector targets in the climate action plan,</p> <p>National financing plan for public sector 2030 targets</p> <p>Business case for the national public lighting retrofit programme,</p>	<p>5, 6 Also 3, 4 for PS</p> <p>18, 19, 20</p> <p>19, 20</p>
10:45		Q&A	
10:55		Comfort Break	
11:00	<p>Alan Ryan, David Power, Programme Executive, SEAI</p> <p>Cathal Brady, Ultan Technologies</p> <p>Liam P. O’Cleirigh, Byrne O’Cleirigh (consultants to SEAI)</p>	<p>Energy management in the Irish public sector</p> <p>Q&A</p> <p>Current public sector Monitoring and Reporting System</p> <p>New system to track energy efficiency and carbon targets to 2030</p> <p>Q&A</p>	5, 6, 8, 16
12:00		Lunch	

Day 1, 1 st December 2020 – Policy context and governance structures; financing planning; SEAI energy supports; central government and government department experience			
12:00		<u>Lunch</u>	
13:00	Orla Coyle, Fergus Sharkey, SEAI	Building a project pipeline to 2030 - project mobilization & retrofit to date	5, 6, 8, 18 Relevant to EPBD
13:30		Q&A and discussion	
14:00		Comfort Break	
14:05	Conor Clarke, Head of Energy Conservation Unit, Office of Public Works	Office of Public Works Optimising Power at Work Programme Conor Clarke OPW, central government building stock	5, 8 Relevant to EPBD
14:45	Eilis O’Connell, Head of HR and Corporate Affairs, Department of Agriculture, Food and Marine	Perspectives from a government department	5
15:00		Discussion – what central government approaches are successful in MS – if possible try and do similar process as other 30min sessions	
15:30		Day 1 - Close	


Questions or comments



- Post on 'chat' anytime
- Raise 'hand' during Q&A
- Open Slido.com


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 Start presenting to display the poll results on this slide.

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What EED article are you most interested in hearing about today ?

 Start presenting to display the poll results on this slide.

Questions Comments Feedback

- *Post on 'chat' anytime*
- *Raise 'hand' during Q&A*



CA EED Irish study visit

1st December 2020

Alan Ryan, Programme Manager
David Power, Programme Executive
Mairead Doherty, Programme Executive
Liam Ó Cléirigh, Byrne Ó Cléirigh
Cathal Brady, Ultan Technologies



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Government of Ireland

Overview

Policy context



Programme budget and resources



Cross sectoral supports, project pipeline



Measuring success – Public Sector M&R system



Future plans

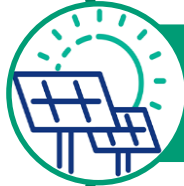


Sustainable Energy Authority of Ireland

Ireland's energy will be sustainable, secure, affordable and clean



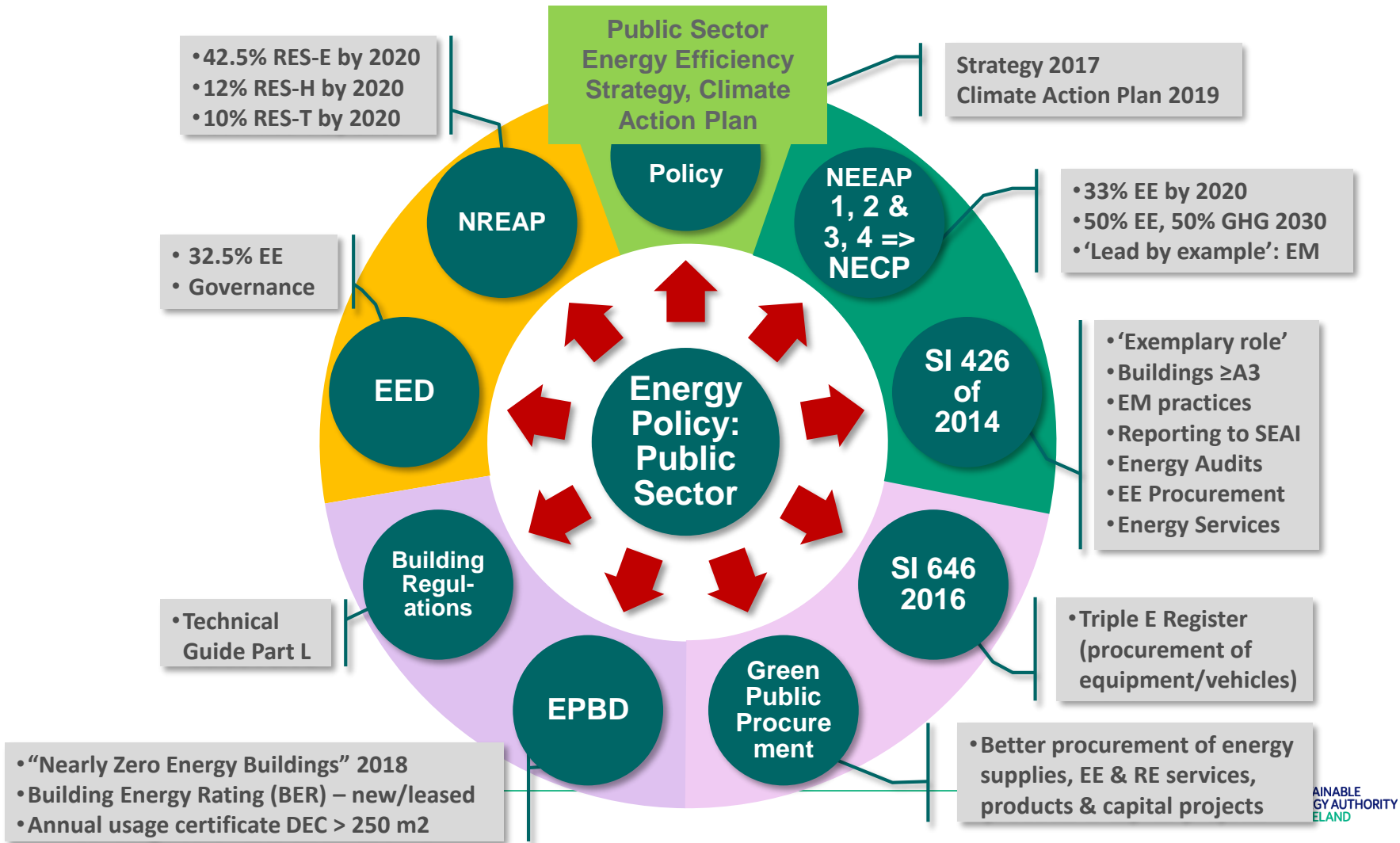
1. Use Less



2. Use Clean



3. Innovate



Public Sector Energy Efficiency Strategy, Climate Action Plan

Strategy 2017
Climate Action Plan 2019

- 42.5% RES-E by 2020
- 12% RES-H by 2020
- 10% RES-T by 2020

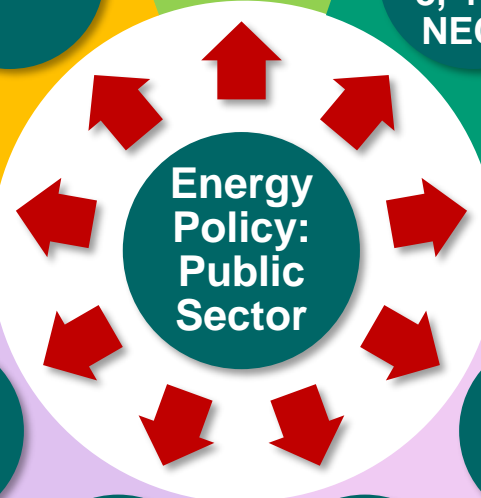
Policy

NEEAP 1, 2 & 3, 4 => NECP

- 33% EE by 2020
- 50% EE, 50% GHG 2030
- 'Lead by example': EM

NREAP

- 32.5% EE
- Governance



EED

- 'Exemplary role'
- Buildings >=A3
- EM practices
- Reporting to SEAI
- Energy Audits
- EE Procurement
- Energy Services

SI 426 of 2014

- Technical Guide Part L

Building Regulations

- Triple E Register (procurement of equipment/vehicles)

SI 646 2016

EPBD

- "Nearly Zero Energy Buildings" 2018
- Building Energy Rating (BER) – new/leased
- Annual usage certificate DEC > 250 m2

Green Public Procurement

- Better procurement of energy supplies, EE & RE services, products & capital projects

Public sector programme budget and resources



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Programmes Strategic Objectives

- Embed **Energy Management & Leadership** in all public bodies
- Assist public bodies / sectors establish **project pipelines** to achieve 2020 & 2030 targets
- Continuous **Energy Performance improvement**.
Track Performance & define reality

High level organisation

- Budgets
 - €1.45m current spend
 - Approx 350k annually on M&R (200k capital)
- Resources
 - Two SEAI
 - David Power – Energy management supports
 - Mairead Doherty – Energy Performance (including M&R)
 - Tendered advisor framework
 - 5 lots – Energy Management, technologies, project management, EPC/financing, coordination

Cross sectoral supports

SEAI Supports

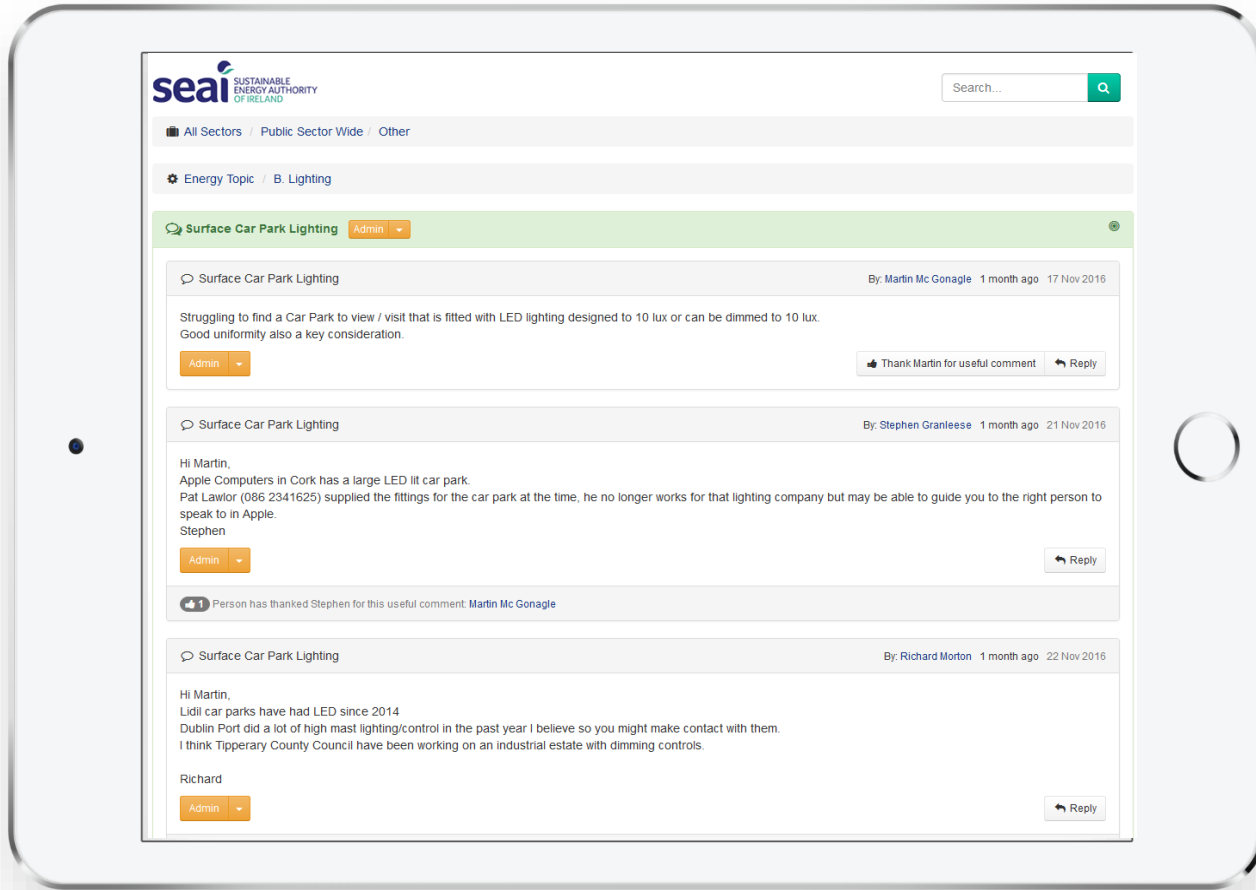
Public Sector Energy Programme Support Manual

A GUIDE TO HOW SEAI CAN SUPPORT YOU IN TRANSFORMING YOUR ENERGY USE

From getting started, to getting strategic and delivering impactful results, this manual sets out the programme of supports available to you in the Public Sector to deliver on energy efficiency.

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- **Start**
 - Identify Energy Team and EPO
 - Network (join Energy Link)
 - Register for events/training (calendar)
 - **Organise**
 - Energy Management Training (Energy Basics, Energy in Education, Energy MAP)
 - **Strategise**
 - Senior Management Commitment (Partnership)
 - Opportunity Assessments
 - Gap to Target
 - **Projects**
 - Develop multi-year plan/project pipeline
 - Engage capital supports
-
- **Monitor & Report**
 - Annual reporting obligation



Energy Link
Knowledge
Portal for
3000+
Public Sector
Members

Public Sector Events Calendar 2020

Details on events and how to register are listed on Energy Link - Click on Events below to go directly to Event webpage

	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
Best Practice Events	M&R Activity Metric Master Class Tue 28th Jan	Public Sector Conference The Helix, DCU Thu 6th Feb	Engaging People Accelerator Showcase Portlaoise Thu 26th Mar	Energy Show Public Sector Briefing Sessions RDS, Dublin Wed 1st & Thu 2nd Apr	Sustainable Transport Thu 21st May				ICT – Energy Efficiency Opportunities TBC Sep	M&R Activity Metric Master Class TBC Oct	2021 SEAI Grants Workshop TBC Nov	
		Optimising ISO 50001 (Act) Portlaoise Thu 13th Feb		Energy Efficient Design (EED) for Design Teams Dublin Tue 28th Apr	Optimising ISO 50001 Tue 19th May					Optimising ISO 50001 Thu 22nd Oct	BMS & HVAC Optimisation TBC Nov	
Accelerator & Other Programmes	ISO 50001 Accelerator 4 (Closed to new entrants) Days 5 & 6 of 10 Wed 22nd - Thu 23rd Jan		ISO 50001 Accelerator 4 (Closed to new entrants) Day 7 of 10 Tue 24th Mar		ISO 50001 Accelerator 4 (Closed to new entrants) Days 8 & 9 of 10 Wed 6th - Thu 7th May	ISO 50001 Accelerator 4 (Closed to new entrants) Day 10 of 10 Thu 18th Jun			ISO 50001 Accelerator 5 Days 1 & 2 of 10 Wed 9th - Thu 10th Sep		ISO 50001 Accelerator 5 Days 3 & 4 of 10 Wed 4th - Thu 5th Nov	
				Engaging People Accelerator Day 1 of 3 Thu 30th Apr	Engaging People Accelerator Day 2 of 3 Thu 28th May	Engaging People Accelerator Day 3 of 3 Thu 25th Jun						
				Project Accelerator Solar PV - Technical Focus Day 1 of 2 Thu 23rd Apr					Project Accelerator Solar PV - Business Case Focus Day 2 of 2 TBC Sep			
Training	M&R Introductory Sessions Sligo Tue 7 Jan AM Cork Wed 8 Jan AM Portlaoise Thu 9 Jan AM Galway Wed 15 Jan AM Dublin Thu 16 Jan AM Dublin Thu 16 Jan PM		Certified Energy Manager (CEM) 6 day Course Mon 9 - Wed 11 Mon 23 - Wed 25 Mar					Certified Measurement & Verification Professional (CMVP®) 3 day Course Mon 6 - Wed 8 July	Energy MAP for PS Organisations Day 1 of 3 TBC			
		Energy Fundamentals Dublin Weds 26th Feb		Energy Fundamentals Athlone Thu 23rd Apr					Energy Fundamentals Sligo Thu 17th Sep			
Annual Milestones	M&R Meter Validation Deadline Fri 24th Jan			Energy Show RDS, Dublin Wed 1st & Thu 2nd Apr	M&R Deadline Fri 1st May	M&R Prelim Data to O's available				All Grant Aided Work Complete	M&R Final Report Issued	
					Sustainable Energy Awards Open for Entries	Sustainable Energy Awards Entries Close				Sustainable Energy Awards Awards Ceremony		

Examples of Supports

The image displays three promotional posters for SEAI (Sustainable Energy Authority of Ireland) initiatives. The first poster, '2020 Accelerator programme', features a central photograph of three men in a workshop setting, surrounded by colorful, stylized leaf-like shapes. The second poster, 'EnergyMAP Leadership in Energy Management', includes a grid of four small images showing people working with charts and equipment. The third poster, 'Optimising ISO 50001 - Operational Control', has a dark blue background with white curved lines and a list of two points.

2020 Accelerator programme
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ENGAGING PEOPLE
- Establishing effective behaviour change approaches that maximise savings
- Promoting environmental leadership in the workplace
- Sharing best practice throughout the Public Sector

EnergyMAP LEADERSHIP IN ENERGY MANAGEMENT
Day 1, Tuesday 6th March 2018
SEAI, Wicklow Plaza, Dublin 2
[Register Here](#)

Training Overview
Background
The Public Sector is committed to a target of improving its energy efficiency by 33% and to be seen to lead by example - showing all sectors what is possible through strong, committed action.
SEAI is supporting the Public Sector in meeting this target and has developed a number of training programmes in consultation with Public Sector organisations. Energy MAP (Energy Management Action Programme) is one of the most popular and successful programmes available.
Target Audience
This is a structured energy management training programme ideally suited to organisations with an energy spend of over €100,000. It is appropriate to those who are new to energy management and those who are returning to energy management where it has lapsed within your organisation.
Benefits of Involvement
Cost Savings: Past experiences of implementing Energy MAP have resulted in minimum savings of 5% of energy bills, with some organisations achieving up to 10-15% savings.
Exemplar Role: Exemplar energy management is a requirement of S.I.426 of 2014 for all public bodies. Implementing Energy MAP is a clear demonstration of exemplar energy management.
Legal Compliance: Finally it puts in place a system for sustained savings and complying with legal and other requirements. A structured energy management programme will be the engine to drive your organisation to substantially improved energy performance towards its 33% energy efficiency target by 2020.

Public Sector Support 2018 Programme

Optimising ISO 50001 – Operational Control
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DATE
Tuesday, 24 November, 2020

TIME
10:00am – 11:30am

LOCATION
Online

AUDIENCE
Facility/energy/fleet managers, anyone involved in operating a significant energy user in an organisation certified to ISO 50001

Operational control is a key aspect of any good energy management system. Without it, incremental improvements will undo themselves over time. If you're operating an ISO 50001 certified EnMS and you'd like to know more, register now for this online event.

To support those organisations already certified to ISO 50001, or actively preparing for ISO 50001 certification, SEAI delivers this ongoing series of events focussed on optimising specific aspects of energy management. The purpose of these events is to provide insights and knowledge to support the optimisation and improvement of your existing energy management system (EnMS).

This training will focus on Operational Control

1. An overview will be given into operational control of Significant Energy Users (SEU's) in the context of an ISO50001 certified EnMS
2. A deep dive into operational control of Leisure Centres and Transport will be given by industry experts to provide an understanding of the day to day operational and maintenance tasks to be undertaken in order to maintain existing performance.

FOR FURTHER INFORMATION
email publicsector@seai.ie
or visit www.seai.ie

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Public Sector Energy Conference

Thursday
6th February 2020
The Helix, DCU

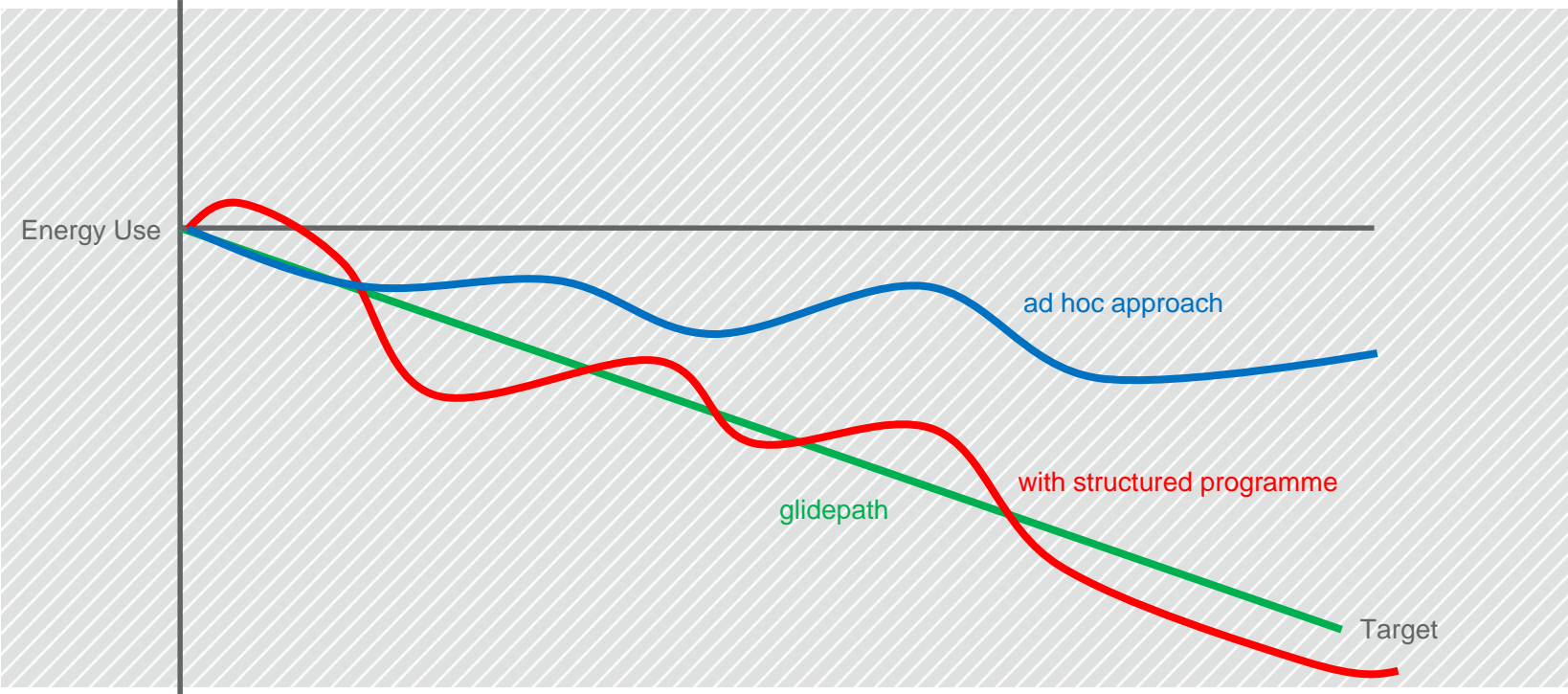


Accelerating
Leadership
towards 2030

Public Sector Conference

- 4th conference February 2020
- 800+ attended
- Plenary with Mary Robinson, Sectoral leadership sessions, Project action sessions
- Next year's conference will focus on 2030 Carbon target

Structured Energy Management



EXEMPLAR ENERGY MANAGEMENT ROADMAP



MICRO BUSINESS
Energy Cost < €25k



SCHOOLS



ORGANISATIONS with
Energy Cost < €250k



ORGANISATIONS with
Energy Cost €250k - €5M



ORGANISATIONS with
Energy Cost > €5M

ASSESS USING



SEAI Home energy assessment or small business tool

Energy in Education EM assessment

Energy MAP basic diagnostic

Energy MAP advanced diagnostic

ISO 50001

HOW TO ASSESS



Self assess*

Self assess*

Self assess*

Independent assessment* ‡

3rd party certification

HOW OFTEN



Annually

Annually

Annually

1 - 1.5 years

Annually

SEAI SUPPORT



Home EM guide, Small business training & pack

EinE training & programme

Energy MAP training/partnership

Energy MAP training/partnership

Tailored support programme

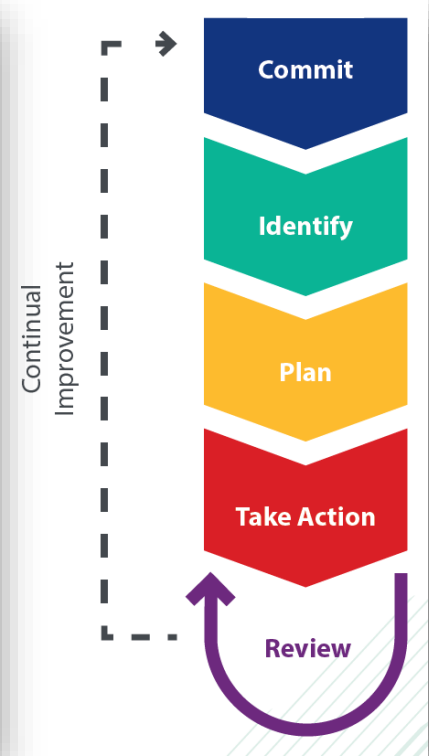
* Annual DEC can also be used for assessment. If the organisation has just one building/campus location then a DEC could be used as a self-assessment tool; but a DEC from one building only cannot be used if the organisation has more than one building. Under SI 426 of 2014, as well as to be exemplar in energy management, all public bodies must report annually to SEAI, and must consider energy efficiency as part of purchasing criteria, amongst other requirements. More information at [Obligations and Targets](#).
‡ The Energy MAP Advanced Diagnostic should be carried out by a Registered Energy Auditor.

Energy Management Action Programme (Energy MAP)

- **Energy MAP family**

- **Public Bodies** **3 x 1 day**
- **Schools** **2 x 0.5 day**
- **Businesses** **1 x 1 day**

- **5-10% energy savings**



ISO 50001 is critical to achieve 2030 targets for large energy users

30 public bodies are certified



Public Bodies certified to ISO 50001

- An Garda Síochána
- An Post
- Bord na Mona
- Central Bank of Ireland
- Clare County Council
- Cork County Council
- Cork Institute of Technology
- daa
- Defence Forces
- Donegal County Council
- Dublin Bus
- Dublin City Council
- Dublin City University
- Dublin Institute of Technology
- Dublin Port

- Dun Laoghaire-Rathdown County Council
- ESB
- Galway County Council
- Gas Networks Ireland
- Irish Rail
- Kerry County Council
- Limerick City & County Council
- Louth County Council
- National University of Ireland, Galway
- Port of Cork
- SEAI
- Transport Infrastructure Ireland
- University College Cork
- University College Dublin
- Waterford Institute of Technology

Public Bodies actively pursuing ISO 50001 certification through SEAI's Accelerator Programme

- Bus Éireann
- Coillte
- Cork City Council
- Dept. of Agriculture, Food and Marine
- Dept. of Communications, Climate Action and Environment
- Dept. of Employment Affairs and Social Protection
- Fingal County Council
- Irish Water
- Kilkenny County Council
- National Treasury Management Agency
- Office of Public Works



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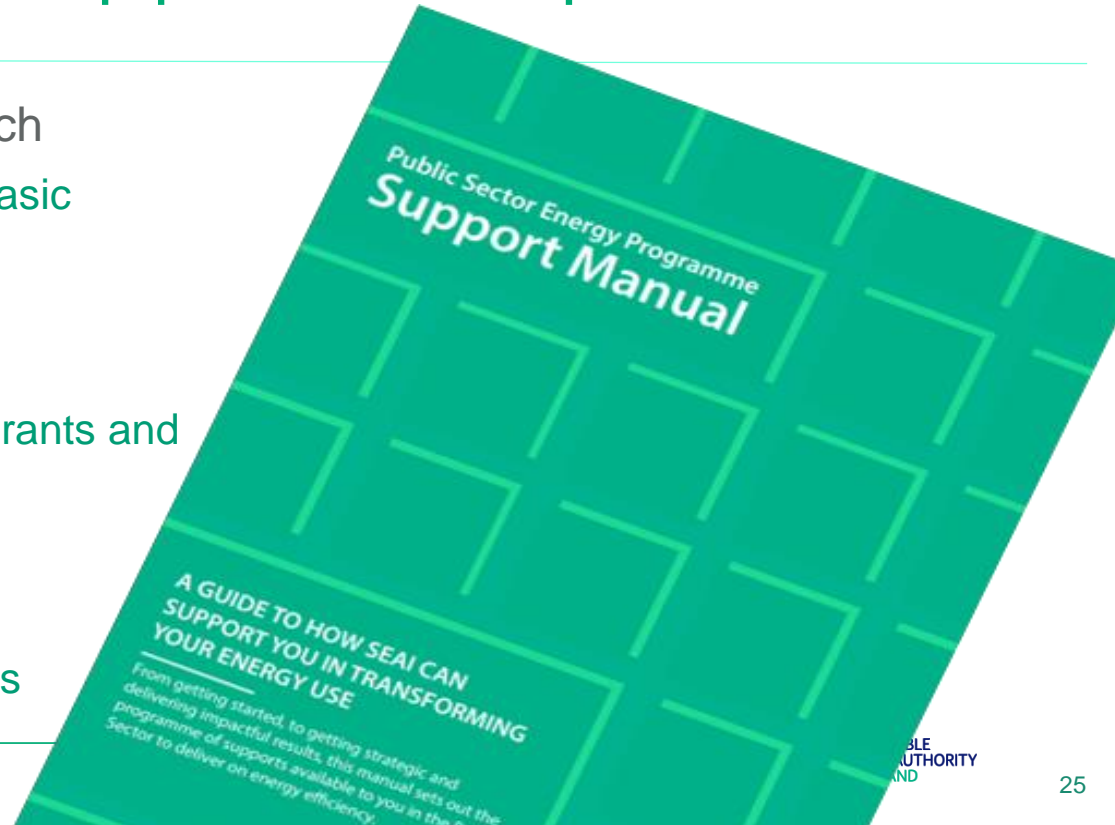
ISO 50001 Accelerator Prog.

- 4th edition complete
- LAs, Transport, Utilities, Gov. Dept.s
- 5th edition planned for 2021



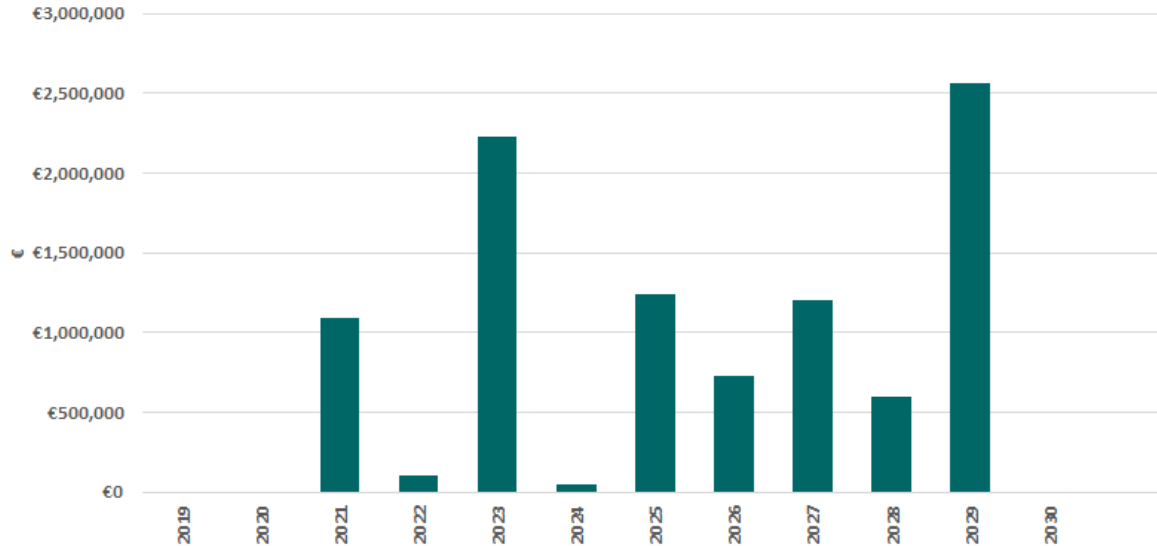
Developing a project pipeline in the public sector

- PB and Sectoral approach
 - Energy Assessments (basic audits)
 - Gap to target tool
 - Prime the pump –
 - Inform of SEAI project grants and supports
- Other schemes
 - Climate Action Fund
 - Department capital funds



Gap to Target tool

- Identify your 'gap to target'
- Identify the projects to close this gap



Cumulative savings
of a series of
capital projects
investment
baseline

BAU
Glidpath
Investment

Getting strategic – Partnership (130 PBs)

- Tailored **Energy Management** support
 - Energy MAP tailored to the organisation
 - Access to ISO50001 accelerator
 - Bespoke training
 - Energy Efficient Design mentoring
 - Long term energy strategies
- Building a **project pipeline**
 - Opportunity assessments
 - Gap to Target analysis
 - Annual review of projects done and planned
 - Advice regarding SEAI capital supports
- **Energy Performance improvement**
 - Monitoring and Reporting mentoring
 - Embed energy performance systems



Sectors
EM and Leadership
Project pipelines
Performance

Sectoral groupings

- Local Authorities
- Healthcare
- Central government
- Education – Universities, Colleges, Training Boards
- Small, medium & very large users
- Schools – Energy in Education

Each sector focuses on....

- Mobilise sector leadership
 - Energy management appropriate to the sector
 - Mobilise public body / sector project pipelines
 - Improve public body / sector performance

Sectoral supports – SEAI advisors

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Energy Bureau

HARBOURS & MARINE

Targeted supports for Public Bodies with common challenges

SEAI has developed a tailored support package for the Harbours and Marine sector.

This Energy Bureau will provide access to technical expertise and supports – to identify issues and challenges in the sector and develop common solutions across several organisations.

Over time as knowledge of the sector develops and opportunities are understood, the Energy Bureau will help support development of a project pipeline.

Benefits of the Energy Bureau

- Access to independent best practice technical advice
- Support on building a project business case
- Advice on grant funding
- Access to a networked community facing similar challenges in improving energy performance
- Bureau support is fully funded by SEAI

etbi
Energy Efficiency
Technologies
Incentive
Scheme

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“SEAI set up energy workshops for our heads of centres and porters. SEAI then reviewed energy management at 20 of our high energy using centres, and identified improvement action plans. Between 2009 and 2018, we saved over €350,000 on energy costs across 60 centres.”

Ray McKeown, Energy Officer, City of Dublin ETB

Energy Management for ETBs

An ETBI and SEAI initiative to maximise energy savings

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Energy Bureau

Smaller Office Based Organisations

Targeted supports for Public Bodies

SEAI is offering a tailored support package for smaller office based organisations (SOBO).

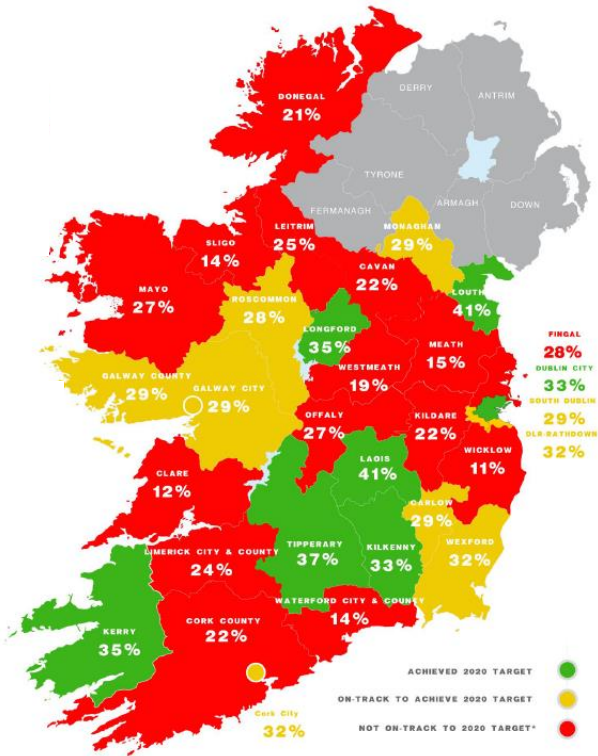
The SOBO Bureau will provide access to technical expertise and supports – to identify issues and challenges in the sector and develop common solutions across several organisations.

Over time as knowledge of the sector develops and opportunities are understood, the Energy Bureau will help support development of a project pipeline.

BENEFITS OF THE ENERGY BUREAU

- Access to independent best practice technical advice
- Support with addressing strategic energy management and developing energy action plans.
- Support on building a project business case
- Advice on grant funding
- Access to a networked community facing similar challenges in improving energy performance
- Bureau support is fully funded by SEAI

Local Authority sector



- Lot of individual LA successes – EPC, 50001, public lighting, EV, community engagement, social housing etc
- Annual best practice network programme with Association of Energy Agencies
- Public lighting project support
- Climate action training
- Energy management bureau will commence in 2021 in North West
- LA key role in national retrofit and environmental objectives
- Engaging with 31 LA chief executives – City and County Management Association
- Collectively exploring how to mobilise the sector for large scale projects

Health sector – hospitals, healthcare, charities



SEAI SUPPORT SERVICES TO HEALTHCARE: NON-ACUTE SECTION 38 & SECTION 39 ORGANISATIONS

General Support

The following support services are currently available to all public sector bodies and most organisations are already familiar with and availing of these services:

SEAI WEBSITE: For general information

ENERGY LINK: For notifications & discussion on energy related topics, registration for all SEAI events, communities of practice for sector specific discussion/events/supports (e.g. Health Sector CoP at <https://energylink.seai.ie/community/view/19>) and working groups on specialised topics.

GUIDANCE DOCUMENTS: Including best practice guides, practical tools, videos (e.g. M&R tutorials at <https://www.seai.ie/energy-in-business/monitoring-and-reporting/supports/>)

EVENTS: Providing networking, briefing, training & workshop events on a variety of topics

MONITORING & REPORTING (M&R) SYSTEM – Providing a portal for all public bodies to report on their energy consumption



New Energy Bureau Support

SEAI are now offering additional supports to those public bodies in this sector who are engaged and motivated. SEAI are aware that for many organisations in this sector, resources, and in particular - technical resources are a key challenge. SEAI have established a mini bureau of technical experts who are on-hand to assist this sector in the short term to gather data, identify energy saving opportunities & get ready for project implementation.

This service is being provided to assess the needs of the sector, provide immediate supports to get energy saving actions and projects moving, and inform the development of a more comprehensive Bureau service.

In the medium term, SEAI is in strategic discussions with the HSE regarding establishment of an Energy Bureau to assist this sector long term by providing technical expertise and project management support. As part of this possible model, SEAI are exploring mechanisms to provide capital supports specific to the sector for pilot projects.

The final proposal will be informed also by the learnings from the HSE Energy Bureau Model which is currently operating in the Dublin North East and Dublin Mid Leinster regions and which will be rolled out to the other HSE regions over the next year. This model involves local energy teams being established in HSE facilities, supported by the Energy Bureau with a focus on user pattern change programmes, the development of registers of opportunities and follow on targeted energy project proposals.

- SEAI advisors & Pathfinder support
 - Energy bureau – part funding energy management resources
 - Capital project support for demonstration pilots
- Significant projects undertaken – behavioural and capital
- 2030 decarbonisation strategy
- Led by national director of estates (Energy Performance Officer)

Schools and Energy Efficiency



- Approx 3700 Schools
- From 20 – 1200+ pupils
- 11% of PS energy use
- 795 schools trained in energy management and received energy assessments
- €1m saved


Questions Comments Feedback

- *Post on 'chat' anytime*
- *Raise 'hand' during Q&A*



slido

What are your questions, comments,
feedback ?

 Start presenting to display the poll results on this slide.

Public sector Monitoring & Reporting System to 2020

Inputs

Electricity and Gas meters numbers @ facility level

Annual energy consumption @ org level

Annual conversion factors & other data

Annual activity data @ org level
E.g. floor area, km travelled, FTE employees

Energy-saving projects

SEAI M&R system

MPRN & GPRN database

Energy consumption data
Network & non-network

Progress towards 2020 energy efficiency target

Other energy indicators

Outputs

ESB Networks

Gas Networks Ireland

Org-level scorecard, detailed reports & gap-to-target analysis

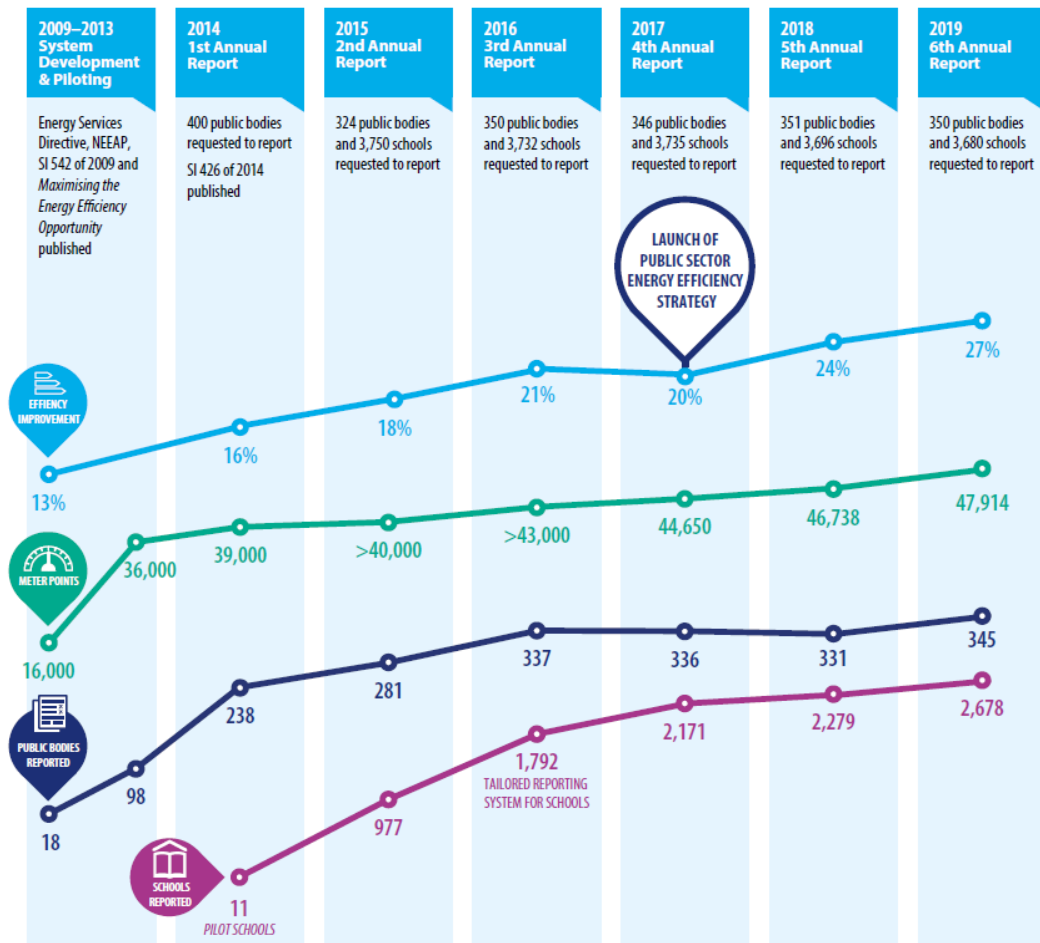


Public-facing annual energy statement

Detailed data for SEAI

Annual public sector energy report
Data for Energy Performance Officers (EPOs)
Project pipeline
Case studies

FIG. 1: PROGRESS BY PUBLIC BODIES AND SCHOOLS



- Excel based system 2009-2012
- Online system 2013 *
- 6th annual report issued in 2019 *

* <https://www.seai.ie/business-and-public-sector/public-sector/monitoring-and-reporting/>

Lots of help and support

- Helpdesk
- Partnership support
- Annual training
- Advanced user training
- Sectoral training ie schools



Monitoring & Reporting system to 2020

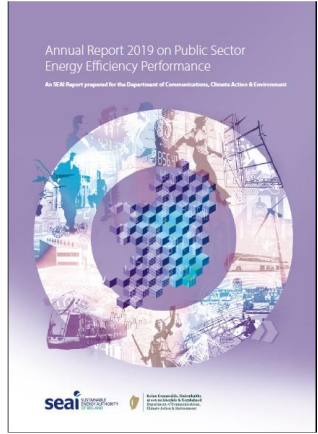
ENERGY EFFICIENCY IMPROVEMENT



PUBLIC BODY REPORTING RATE



SCHOOL REPORTING RATE



Key Findings for 2018

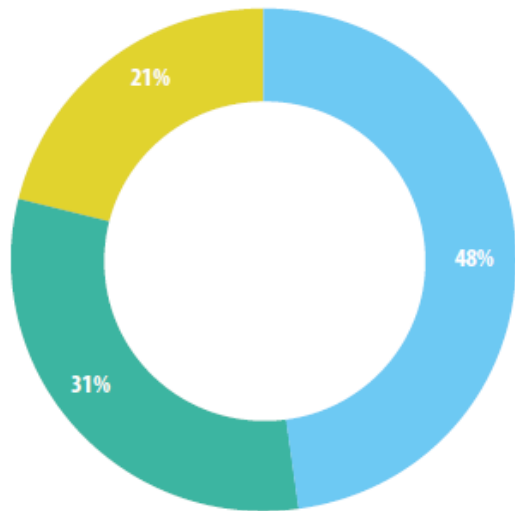
10,178 GWh

COMBINED ENERGY CONSUMPTION OF THE 345 PUBLIC BODIES AND 2,678 SCHOOLS THAT REPORTED



WHICH AMOUNTED TO A TOTAL ENERGY SPEND OF

€668m

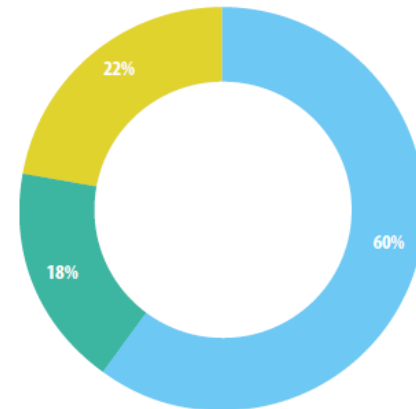


Fuel type	2018 Energy Consumption (Primary) GWh
Electricity	4,922
Thermal	3,124
Transport	2,132
Total	10,178

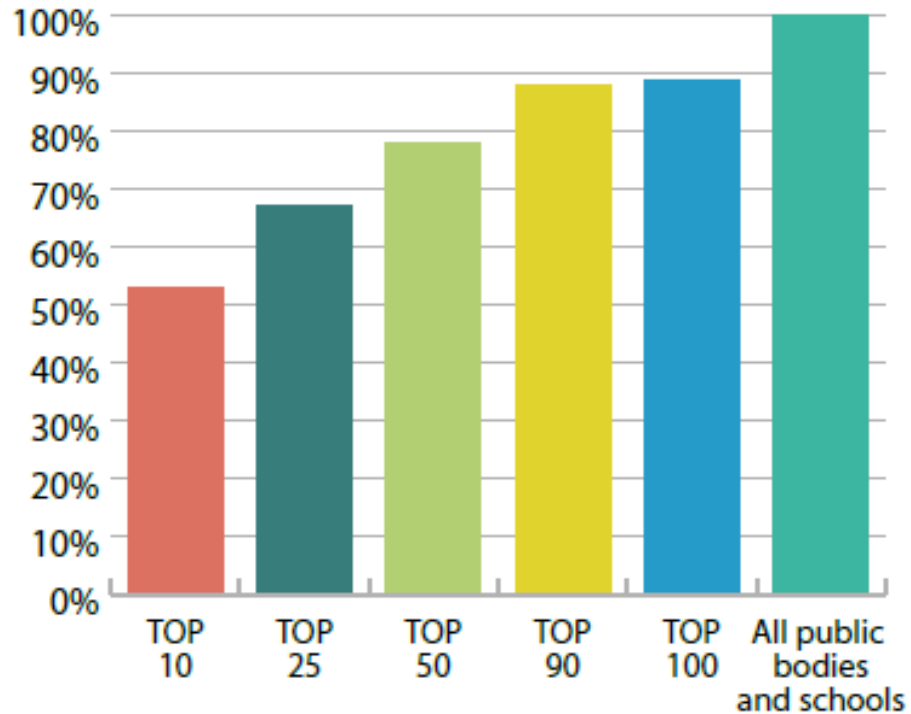
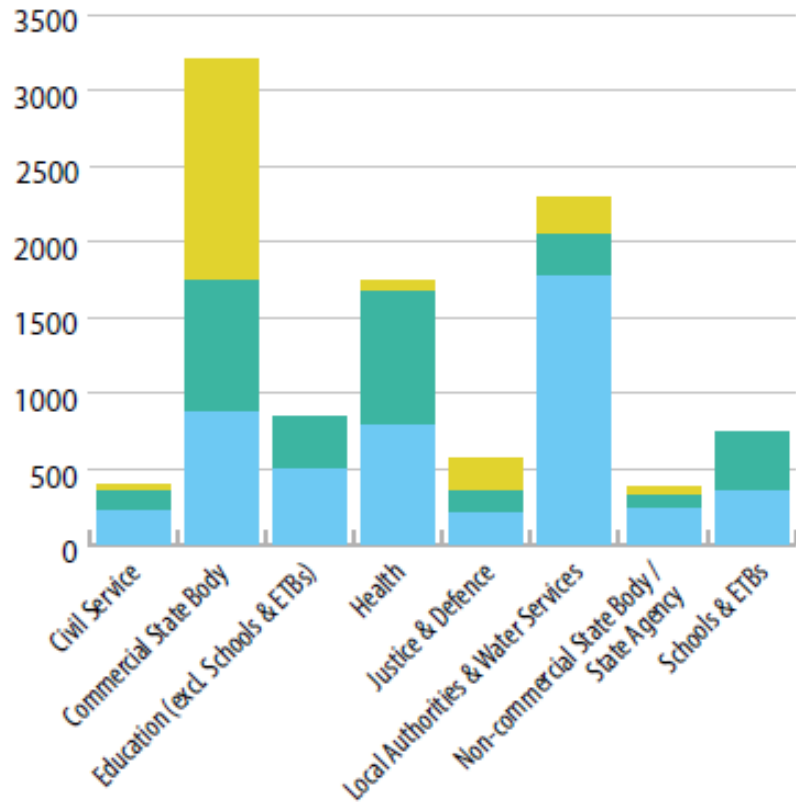
Breakdown by Use	2018 Electricity Consumption (Primary) GWh
Office Buildings	609
Education Buildings	775
Healthcare Buildings	773
Other Buildings	454
Water Services	883
Public Lighting	402
Waste & Other Processing	356
Transport	178
Other	147
Unknown	346
Total	4,922

X % consumption is in buildings

FIG. 6A: THERMAL ENERGY BREAKDOWN



Fuel	2018 Consumption (Primary) GWh
Natural Gas, LPG & Biogas	1,882
Heating Oils	554
Wood Fuels	688
Total	3,124



Making Progress

The data submitted demonstrates savings achieved through the implementation of thousands of efficiency measures. During 2017 and 2018, 95 projects were supported by the DCCAE Mobilisation Fund through SEAI in partnership with the OPW, the HSE and the Department of Education and Skills. Over half of the measures reported addressed **lighting, heating, building fabric and structured energy management improvements**. Projects in schools accounted for a further 26%. The projects illustrated on these pages are a selection of the **4,036 projects** that were reported to SEAI in 2018. While the overall level of project reporting is improving, many of the efficiency measures are still relatively small-scale.

During 2018 and 2019, DCCAE, SEAI and the OPW delivered a series of workshops to provide guidance, advice and support to help public bodies through their Departmental Energy Performance Officer network groups. This process is helping to drive progress, facilitate the sharing of best practice and assess the range and nature of project opportunities to develop a project pipeline. Feedback from those groups who have participated has been very positive.

Further details of the projects reported by public bodies can be found in SEAI's online database of public sector energy-saving projects. This is available at www.seai.ie/publicsectorreport

Note: Case study savings are total final consumption (except where indicated). All other figures in the report are primary energy consumption.



14,000 kWh

Louth County Council Animal

Pound installed solar photovoltaic generators and a wind turbine in 2017, generating approximately 6,570 kWh of electricity at the site per year. To further improve efficiency, the Council installed a heat pump in 2018, with grant funding from SEAI's Community Grant Scheme. Through this combination of energy saving measures and on-site generation, dependence on imported energy has reduced by 30%, equivalent to almost 14,000 kWh per annum.

Louth County Council



80,000 kg of CO₂

Inland Fisheries Ireland

invested €160,000 in a range of measures aimed at reducing their CO₂ emissions, with a target set for an overall reduction of 24%. To achieve this they rationalised and reduced their vehicle fleet, utilised telematics to implement a fleet management system to generate efficiencies, renewed older vehicles with more efficient models and purchased eight electric vehicles. These measures meant the organisation used approximately 45,000 fewer litres of fuel in 2018 and avoided over 80,000 kg of CO₂ emissions.

Inland Fisheries Ireland



- Government department performance

Departmental Group	2018 Energy Consumption (Primary)	Compliance		Overall Status (2018)	Energy Savings Since Baseline
	% public sector	No. complete reports	No. organisations		%
Agriculture, Food & the Marine	12%	11	11	●	21%
Business, Enterprise & Innovation	<1%	14	15	●	46%
Children & Youth Affairs	<1%	5	5	●	21%
Communications, Climate Action & Environment	4%	16	16	●	32%
Culture, Heritage & the Gaeltacht	<1%	17	17	●	32%
Defence	3%	3	3	●	26%

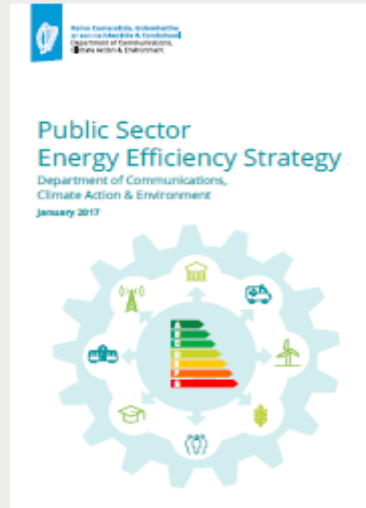
- Public body performance

Public Body	2018 Energy Consumption (Primary)	Overall Status (2018)	Energy Savings Since Baseline
	GWh		%
Abbey Theatre	2.2	●	20.5%
Ability West	2.8	●	26.5%
Adoption Authority of Ireland	0.2	●	32.7%
AHEAD	<0.1	●	31.0%
An Bord Pleanála	1.0	●	46.4%
An Foras Teanga - Foras na Gaeilge	0.8	●	12.2%
An Foras Teanga – Ulster Scots Agency	<0.1	●	24.6%
An Garda Síochána	191.2	●	27.0%
An Post	145.8	●	8.1%
Arts Council	0.5	●	26.0%
Athlone Education Centre	0.1	● ₂	32.8%



CASE STUDY:

Energy Performance Monitoring and Reporting -
Department of Communications, Climate Action
and Environment (DCCAE) and Sustainable
Energy Authority of Ireland (SEAI)



Since 2009 SEAI's Energy Performance Monitoring and Reporting System has tracked progress by the public sector towards its target to improve energy efficiency by 33% by 2020. With a 20% improvement at end 2016, €730m and 2.6m tonnes of carbon have been saved.

This data is now driving the implementation of the **Public Sector Energy Efficiency Strategy** which is being led by DCCAE. The Strategy is activating senior leadership on energy management and establishing a project pipeline to ensure cost-effective, energy-efficient investment in public buildings and transport fleets. Meeting the target would see further savings of €750m and 2.8m tonnes of carbon.

Recognition as
an evidence
based policy
making tool

Data entry main screen

Home | Your 2019 Report | Review Your Performance | Manage Your Meters

Progress Bar ? You have completed your report. You can still review your data by clicking on the green ticks

Organisation Users Baseline Activity Metrics Metrics Values Energy Types Consumption MPRNs GPRNs Projects Performance Reasons Formal Assessment

1 Organisation ?

City of Dublin Education & Training Board [Review your details](#) →

Ray Mckeown, [Manage your M&R system users](#) →

1 sub-organisation [Manage your sub-organisations](#) →

↓

2 Baseline & Activity Metrics ?

Baseline Period: 2009 [Change](#) →

Activity Metrics for 2019

Organisation-level Total Useful Floor Area (m2) 193,210

[Change the basis for your activity metrics](#) → [Change the values reported for your activity metrics](#) →

↓

3 Energy Usage ?

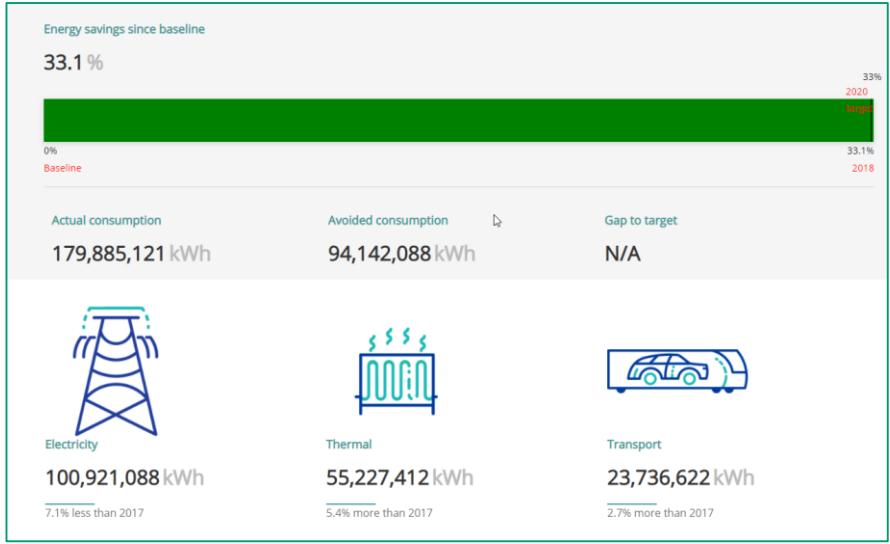
You have 4 MPRN(s) for which data has not been provided by the meter operators. Review your MPRN(s) to see which meter(s) have been affected, and why.

Select the energy types you use	✓ →	Gasoil	110,547 litre	✓ →
Enter your energy consumption	✓ →	Net Electricity Imports (non-MPRN data)	69,000 kWh	✓ →
Update your MPRN data	✓ →	Natural Gas (GPRN data)	View Consumption	→
Update your GPRN data	✓ →	Net Electricity Imports (MPRN data)	View Consumption	→

↓

4 Energy Saving Projects ?

Projects Completed 0

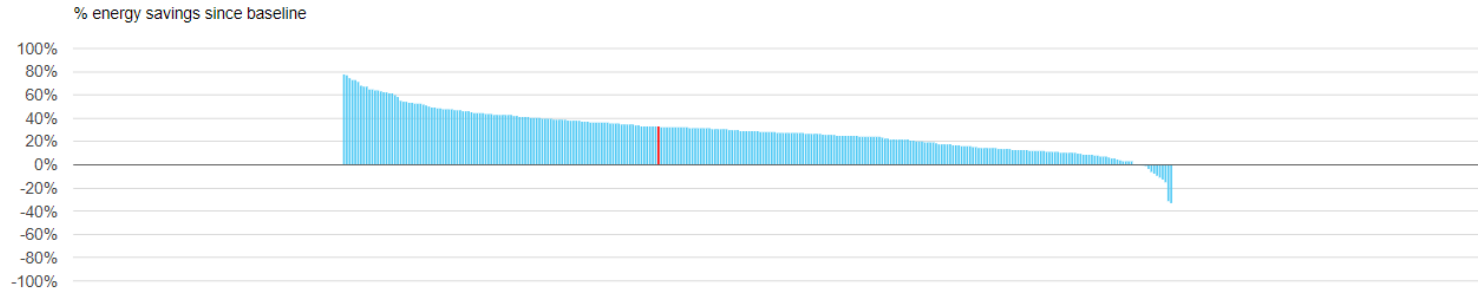


Data accessible to the public
<https://psmr.seai.ie/public>

Dublin City Council

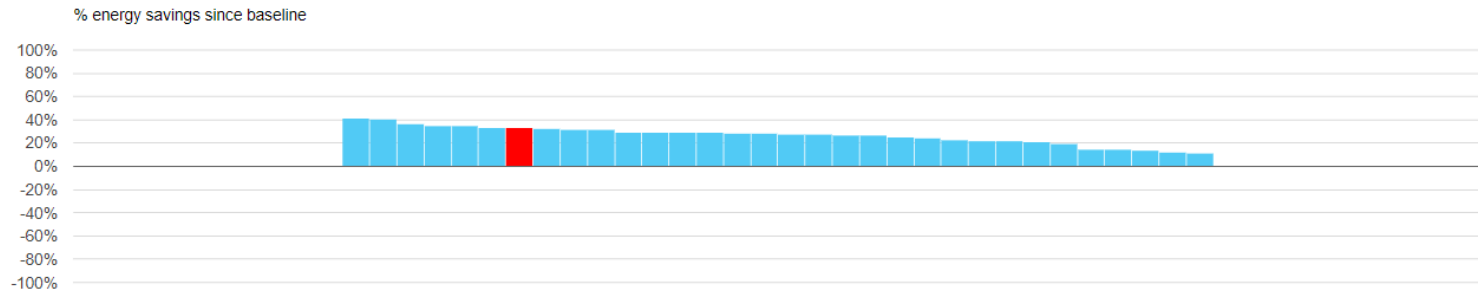


Your savings compared to all public bodies



Dublin City Council is the 112th best performer out of 293 public bodies. Please note that another 57 public bodies were removed from this comparison because they either submitted insufficient data to calculate a savings result or aspects of their data need to be improved or verified.

Your savings compared to others in Local Authority

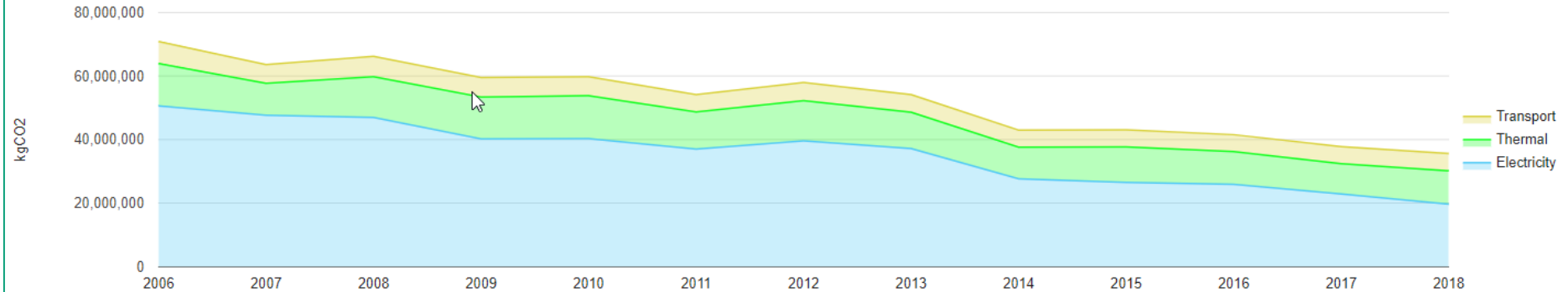


2018 CO₂ emissions


35,614,029 kgCO₂

CO₂ emissions since baseline

Any apparent drop in consumption between 2013 & 2014 is due, in large part, to the transfer of water services assets to Irish Water



Building register produced for SRSP supported study


log out

Home
Building Register

Dashboard

Manage Buildings

- City of Dublin Education & Training Board
 - Parnell Square Training Centre
 - Adult Guidance Service, Arran Quay
 - Artsquad Finglas
 - Ballsbridge College
 - Ballyfermot CFE - Media Bldg
 - Ballyfermot College of Further Educ
 - Ballyfermot CFE Arts Block
 - Ballyfermot Training Centre
 - Ballyfermot Youthreach
 - Ballymun Comprehensive School
 - Bonnybrook Youth Reach Kilmore R
 - Buildings Maintenance Section, Can
 - Cabra Community College
 - Cabra Creche, Kilkieran Road
 - Cabra Multiplex
 - CDVEC Sportsground Terenure
 - CDVEC Townhall Ballsbridge
 - CDVEC 1 Parnell Square
 - CDVEC 1 Pembroke Place Ballsbridg
 - CDVEC, No 2 Pembroke Place, Ballsi
 - CDYSB Donnybrook
 - Colaiste Dhulaigh CFE Coolock
 - Colaiste Dhulaigh CFE, Greendale C
 - Colaiste Dhulaigh Main
 - Colaiste Dhulaigh Post Primary Coo
 - Colaiste Eanna Cabra
 - Colaiste Eoin Finglas

Add New (+)
Delete (X)
Link to Meter (→)
Remove All Meters (→)
Download (↓)

Save (✓)
Cancel (X)

Info

Name:

Address: Add Address (→)

Type:

Building Type:

Ownership Status:

How is Floor Area Determined?:

Heating Type:

Retrofit Works since 2015:

Age Category:

Is a DEC applicable?:

Description:

Other Building Type:

No. of Months till Renewal:

Floor Area in m²:

Heritage/Protected Status:

Year Retrofit Done:

BER Rating:

Date DEC Expires:

Meters

Number	Location	County	Consumption Category	Percentage	
<input type="checkbox"/> 10003537347	Ballyfermot TC	Dublin 12	Education Building	<input type="text" value="100"/>	<input type="text" value=""/>
<input type="checkbox"/> 89308	Ballyfermot Training Centre	Dublin 10	Education Building	<input type="text" value="100"/>	<input type="text" value=""/>

Add (+) Delete selected (X)

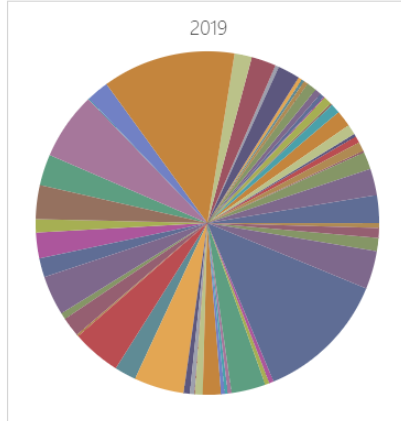
2021 – more graphical interfaces for energy management

Overview

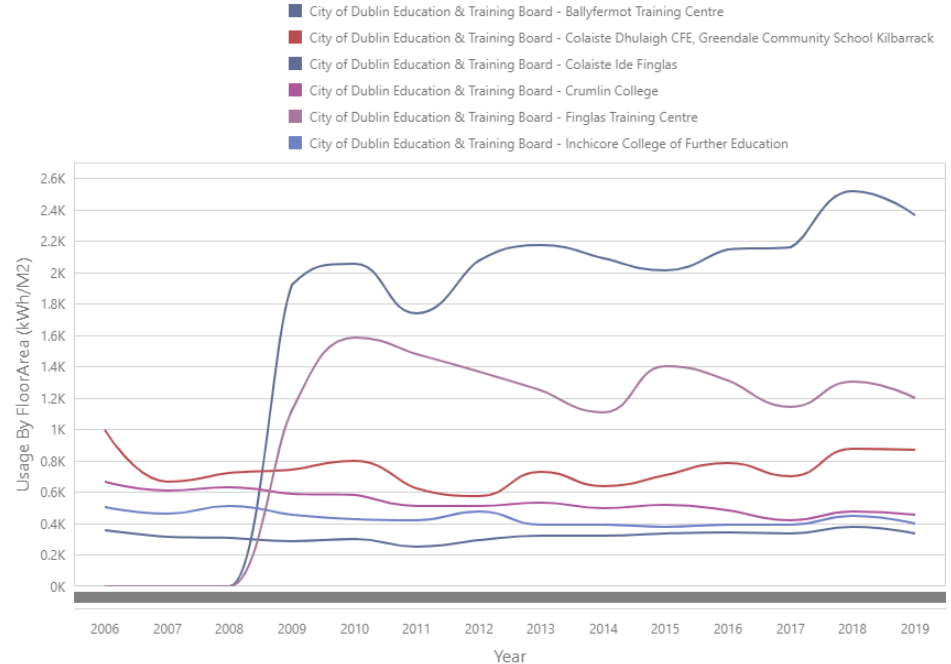
Building Type

- (All)
- Education Building other than a School
- Office (Air Conditioned)
- Office (Naturally Ventilated)
- Sports Facilities
- Store/Warehouse
- Theatre

Share of 2019 Electricity & Gas consumption...



Electricity & Gas Energy consumption



Buildings

Group Name	BuildingName	Usage(in kWh)	FloorArea(in M2)	Total Usage
City of Dublin Education & Training Board	Colaiste Ide Finglas		3,500.00	15,733,650.30
City of Dublin Education & Training Board	Colaiste Eoin Finglas		1,300.00	14,610,701.75

An adult education training centre

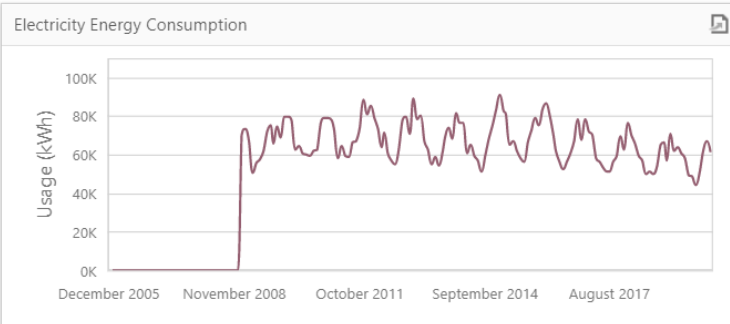
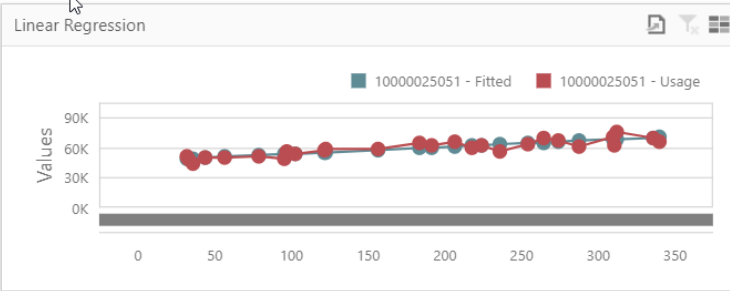
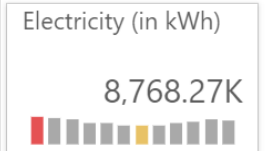
Building Energy Overview

Select Year

(All)

Select Building

Finglas Training Centre



R Square

0.79

Estimated Electricity Cost

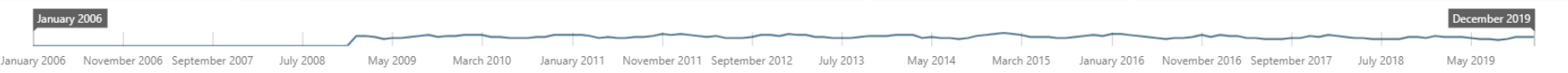
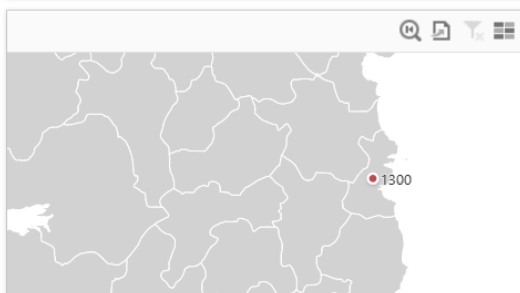
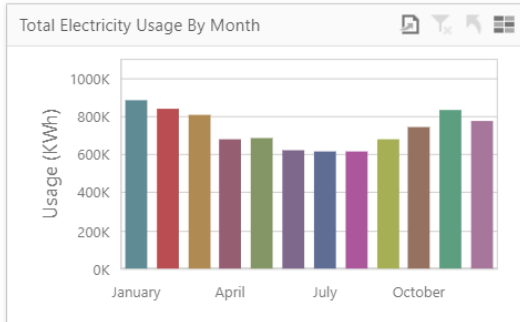
0.10905 €/KWh

€962.00K

Estimated Gas Cost

0.043160 €/KWh ...

€241.50K



Public sector Monitoring & Reporting System to 2030

Monitoring and Reporting system to 2030

M&R system 2030

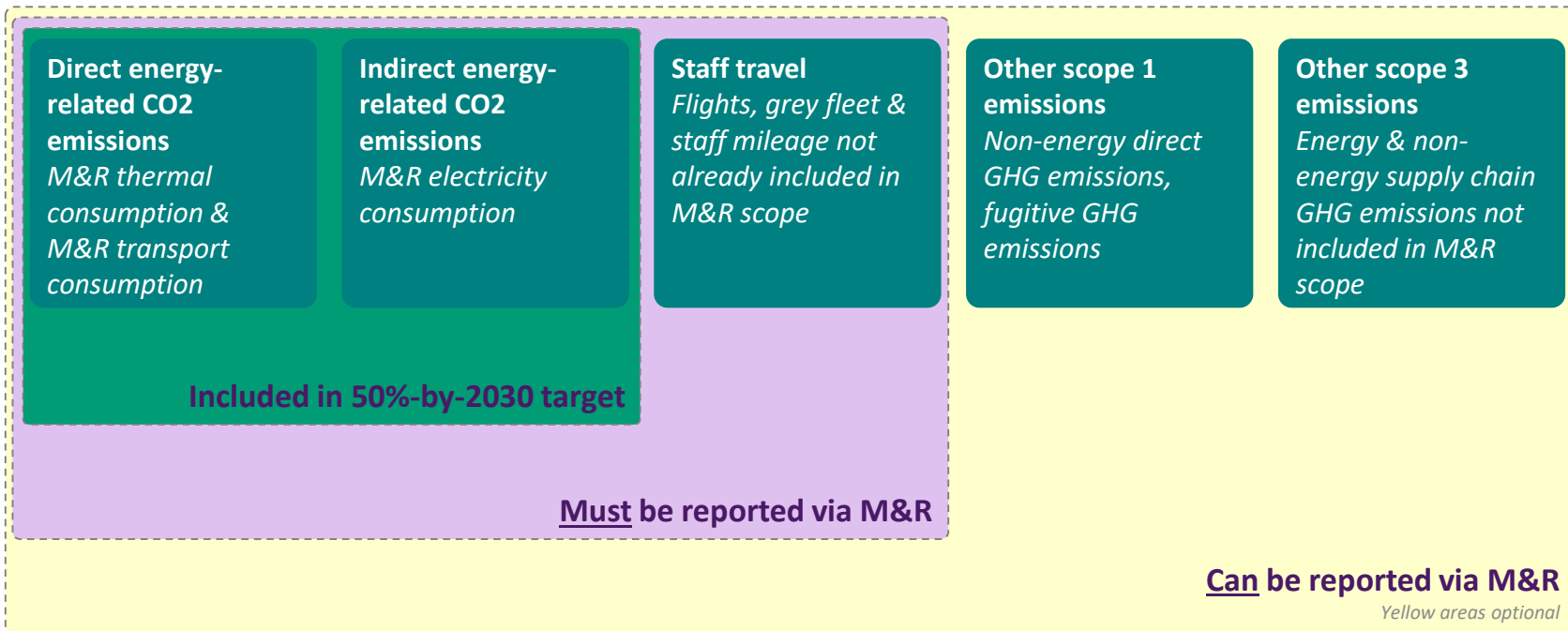
- Tender software provider 2020
- Development 2021
- Phase 1 launch January 2022 Phase 2 – Q2 2022 onwards

- **Phase 1** – organisational level tracking of targets *50% EE, 50% GHG, clean vehicle directive compliance (DTTAS), and enhanced graphics and analytics*
-
- **Phase 2 onwards** – *asset level performance, B rating tracking, green public procurement compliance, wider emissions reporting.....*

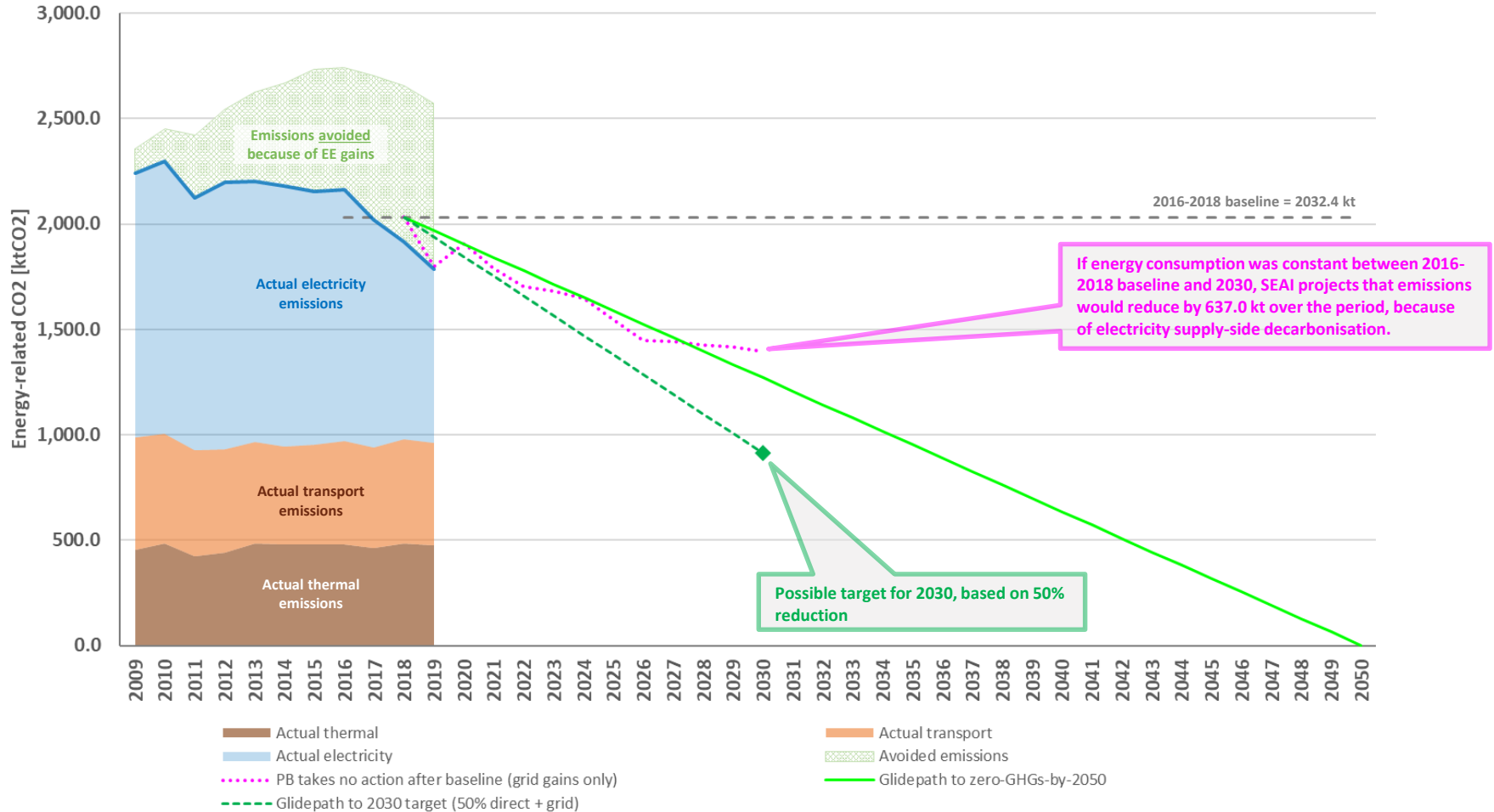
Key Principles

1. Direct (Heat and Transport) emissions must be reduced by 50%
2. Indirect (Electricity) emissions must form part of the target to ensure electricity demand reduction is valued, electrification is done sensibly, and supply side decarbonisation is encouraged (i.e. “own action”)

Possible target framework – scope of target & reportable emissions



Public sector



Inputs

MPRNs & GPRNs @ facility level

Annual validation

Annual energy consumption @ org level

E.g. oil in litres, diesel in litres, wood chips in tonnes

Annual conversion factors & other data

Annual activity data @ org level

E.g. floor area, km travelled, FTE employees

Other annual CO2 emissions @ org level

Some mandatory; some optional

Fleet inventory & vehicle procurements

Broken down by vehicle type

Annual energy costs @ org level

Total costs or average unit prices, by energy type

Energy-saving projects

Implemented & planned

Register of buildings

Building characteristics & DEC compliance

Asset-level energy consumption (annual)

SEAI M&R system

MPRN & GPRN database

Energy consumption data

Network & non-network

**Progress towards
2030 energy
efficiency target**

**Progress towards 2030
CO2
reduction target**

**Compliance with Clean Vehicles
Directive (CVD)**

Other energy indicators

Organisation-level & asset-level

Outputs

ES Networks



Org-level scorecard, detailed reports & gap-to-target analysis



Public-facing annual energy statement

Detailed data for SEAI

*Annual public sector energy report
Data for Energy Performance Officers (EPOs)
Project pipeline
Case studies*


Questions Comments Feedback

- *Post on 'chat' anytime*
- *Raise 'hand' during Q&A*



slido

What are your questions, comments,
feedback ?

 Start presenting to display the poll results on this slide.

Thanks

Alan Ryan, Programme Manager

David Power, Programme Executive

Mairead Doherty, Programme Executive

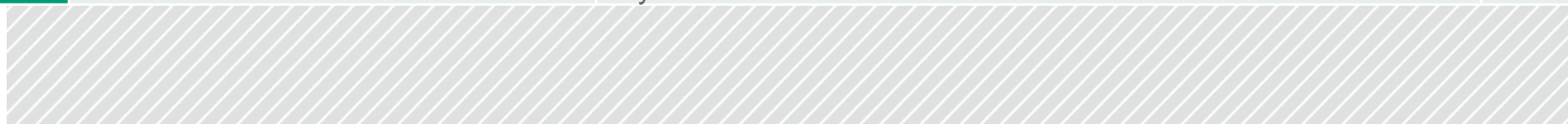
Liam Ó Cléirigh, Byrne Ó Cléirigh

Cathal Brady, Ultan Technologies

Day 1, 1 st December 2020 – Policy context and governance structures; financing planning; SEAI energy supports; central government and government department experience			
12:00	-	<h1>Lunch</h1>	
13:00	Orla Coyle, Fergus Sharkey, SEAI	Building a project pipeline to 2030 - project mobilization & retrofit to date	5, 6, 8, 18 Relevant to EPBD
13:30		Q&A and discussion	
14:00		Comfort Break	
14:05	Conor Clarke, Head of Energy Conservation Unit, Office of Public Works	Office of Public Works Optimising Power at Work Programme Conor Clarke OPW, central government building stock	5, 8 Relevant to EPBD
14:45	Eilís O’Connell, Head of HR and Corporate Affairs, Department of Agriculture, Food and Marine	Perspectives from a government department	5
15:00		Q&A and discussion	
15:30		Day 1 - Close	



Day 1, 1 st December 2020 – Policy context and governance structures; financing planning; SEAI energy supports; central government and government department experience			
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15:00		Q&A and discussion	
15:30		Day 1 - Close	




Questions Comments Feedback

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- *Raise 'hand' during Q&A*




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What surprised you, what was interesting,
what was new ?

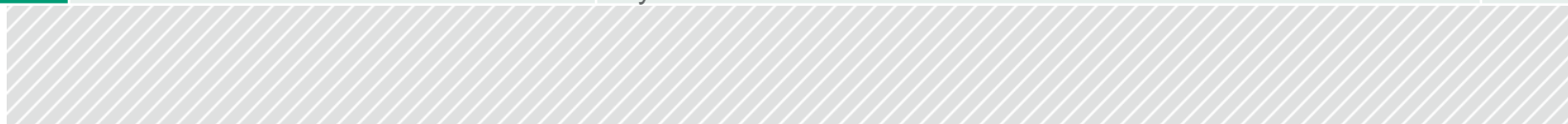
 Start presenting to display the poll results on this slide.

slido

Are you doing similar or different approaches in your MS? What works well or doesn't work in your MS ?

 Start presenting to display the poll results on this slide.

Day 1, 1 st December 2020 – Policy context and governance structures; financing planning; SEAI energy supports; central government and government department experience			
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Questions Comments Feedback

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- *Raise 'hand' during Q&A*




slido

What surprised you, what was interesting,
what was new ?

 Start presenting to display the poll results on this slide.


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How does your MS address Article 5 and 6
? Whats working and whats not ?

 Start presenting to display the poll results on this slide.

slido

What's the one big learning today you are taking away with you for your MS ?

 Start presenting to display the poll results on this slide.

CA EED Irish study visit

Day 2 – 2nd December 2020



Rialtas na hÉireann
Government of Ireland

seai SUSTAINABLE
ENERGY AUTHORITY
OF IRELAND



Day 2, 2nd December 2020 – Public sector bodies perspectives including schools & education, local authorities, health, university and water examples

09:00	Alan Ryan	Introduction and welcome to day 2 – summary of day 1	
09:10	John Dolan, Senior Engineer, Department of Education and Skills	Energy performing school buildings, from energy management, to piloting to planning a large scale retrofit programme	5, 6, 8 Relevant to EPBD
09:40		Q&A & discussion – approaches to schools in other MS	
09:55		Comfort Break	
10:00	Richy Kelly, Estates Manager, Dublin City University	A typical universities decarbonization journey	5,6, 7, 8, 18
10:20	Celine Reilly, Manager, Dublin City Council, Brian Ahern Road Management Office Joe Hayden, Senior Engineer, Codema	Local authority sector energy management, metering and monitoring and project pipelines	5,6, 7, 8, 18
10:50		Q&A – university or local authority success examples in other MS.	
11:05		Coffee Break	
11:20	Peter Smyth, Assistant National Director of Estates, Health Services Executive	Health Sector energy management, pilots and 2030 decarbonisation planning	5,6, 7, 8, 18
11:50	Charlie Coakley, Sustainability Policy Lead, Irish Water	Energy management and project pipeline in the water sector	5, 6, 7, 8 Relevant to EPBD
12:05		Discussion – - Good practices in the health and large state companies in other MS - Next steps – how to keep the networking going	
12:25	Fergus Sharkey, Head, SEAI	Closing remarks	
12:30		Close	

What EED article are you most interested in hearing about today ?

0 2 5

(1/2)

Art 2-4

8 %

Art 5

80 %

Art 6

4 %

Art 7

48 %

Art 8

24 %

slide

Open text poll

What surprised you, what was interesting, what was new ?

0 1 1

(1/2)

- no, only where money come from, not the schemes/instruments
- Sources of funding??
- Impressed by Ireland's serious commitment to stepping things up after 2020 and move towards deep retrofit
- What was the original budget that was mentioned to be doubled this year?
- Ministry of Finance involved!
- Demonstrates importance of applying learnings from projects to scale up
- All is so magically intertwined..congrats..
- Great job, well organised
- Effective and focused work
- How many human years is used for the support in SEAI
- The amount of data that's being collected on the public sector is impressive, opens up a lot of possibilities
- Wow, So much detail
- Deep retrofit and decarb challenge very complex
- Maybe I missed this: EPC or Pub

What's the one big learning today you are taking away with you for your MS ?

0 0 6

- Senior management driving public sector energy efficiency is crucial
- Yo are a great example for all of us
- Investing time and the right resources in drafting a good business case for retrofit projects
- Involvement is the key to success
- It is possible to be done...there is still hope for us :)
- a lot of effort is needed


Questions Comments Feedback

- *Post on 'chat' anytime*
- *Raise 'hand' during Q&A*



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How do you address energy efficiency in schools in your MS ? Policy and implementation.

 Start presenting to display the poll results on this slide.


Questions Comments Feedback

- *Post on 'chat' anytime*
- *Raise 'hand' during Q&A*



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How do you address energy efficiency in higher education and local authorities in your MS? Policy and implementation?

 Start presenting to display the poll results on this slide.


Questions Comments Feedback

- *Post on 'chat' anytime*
- *Raise 'hand' during Q&A*



slido

How do you address energy efficiency in higher health and water sector in your MS?
Policy and implementation?


 Start presenting to display the poll results on this slide.

Thank you for your
participation and to our
speakers




slido

Please share your policies and practices relevant to schools, higher education, local authorities, health and water services

 Start presenting to display the poll results on this slide.

slido

What's the one big learning from the study visit you are taking away with you for your MS ?

 Start presenting to display the poll results on this slide.

Day 2, 2 nd December 2020 – Bonus sessions on transport			
14:00	Alan Ryan, Public sector Programme manager, SEAI Conor Molloy, Authentic Solutions (energy advisor on behalf of SEAI)	Introduction	
14:05	Maurice Harnett, Principal Officer, Dept Transport, Tourism and Sport	Clean Vehicle Directive implementation in Ireland, ongoing consultation and plans to track compliance on the Monitoring and Reporting system	5
14:20	Conor Molloy, Authentic Solutions (energy advisor on behalf of SEAI)	An overview of energy management energy saving potential in the transport sector <ul style="list-style-type: none"> - Vehicle types and less carbon intensive options - Procurement examples - Eco driving and behavioural change potential - Monitoring and optimisation systems - Staff integration and acceptance examples - M&V - Article 7 experiences - Energy management and ISO50001 examples 	5, 6, 7, 8
15:00	Case studies John Smith, Facilities manager, An Post James Jones, Fleet Asset Manager, ESB networks	An Post national post office service Electricity Supply Board – national electricity network <ul style="list-style-type: none"> - ISO50001 experience and results - EV transition across multiple small and remote sites - Eco driving experience and staff buy in - Performance procurement & M&V of savings, 	5, 6, 7,
15:30-15:45		Discussion & close	