

Annual Report 2018 on Public Sector Energy Efficiency Performance

An SEAI Report prepared for the Department of Communications, Climate Action & Environment



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1. Executive Summary

This is the fifth annual report on the energy efficiency performance of public bodies in Ireland. It is set in the context of Ireland's EU and national commitments and wider climate change goals, whereby a target of 33% energy efficiency improvement is to be achieved by all Irish public bodies (as defined in SI 426 of 2014¹) by 2020.

Energy efficiency continues to be a national imperative with a crucial role to play in Ireland meeting its national and international energy and climate goals and objectives. National energy efficiency efforts are also driven by the need for improved security of energy supply and to deal with fluctuating energy costs. The 2015 energy white paper, *Ireland's Transition to a Low Carbon Energy Future*, sets out the overall national policy context and emphasises how energy efficiency will be at the centre of a transition to a clean, low carbon energy system by 2050. The strategic importance of public sector energy efficiency is underlined in Ireland's fourth *National Energy Efficiency Action Plan* (April 2017) and first *National Mitigation Plan* (July 2017). It is also central to the Government's first *Public Sector Energy Efficiency Strategy* (2017). This report provides the latest annual evidence base which underpins that strategy.

Public bodies are required to report annual energy efficiency data to the Sustainable Energy Authority of Ireland (SEAI) which manages the reporting process on behalf of the Department of Communications, Climate Action and Environment (DCCAE)². The definition of 'public bodies' in Ireland is broad and includes the civil service, local authorities, non-commercial state bodies/agencies, commercial state bodies and organisations in the health, justice, defence and education sectors.

Approximately 94% of all public bodies are now using the online national energy monitoring and reporting (M&R) system established by SEAI and DCCAE, in addition to 62% of all schools. The monitoring and reporting system provides an important record of how the public sector performed in 2017.

The data for 2017 shows that overall public sector energy efficiency gains have reached 24%, which indicates a growth in savings following the plateau observed last year. The detailed data in this report for 2017 cannot, however, be compared on a like for like basis to the data for previous years as the overall number of public bodies and schools reporting changes from year to year.

- For 2017, 351 public bodies were requested to report data to SEAI, of which 331³ submitted complete reports by the reporting deadline.
- In addition, 3,696 standalone schools were requested to report data, of which 2,279⁴ submitted complete reports.

This report comprises an analysis of the data submitted by these organisations on annual energy consumption, energy savings achieved and energy efficiency performance in 2017 against 2020 targets.

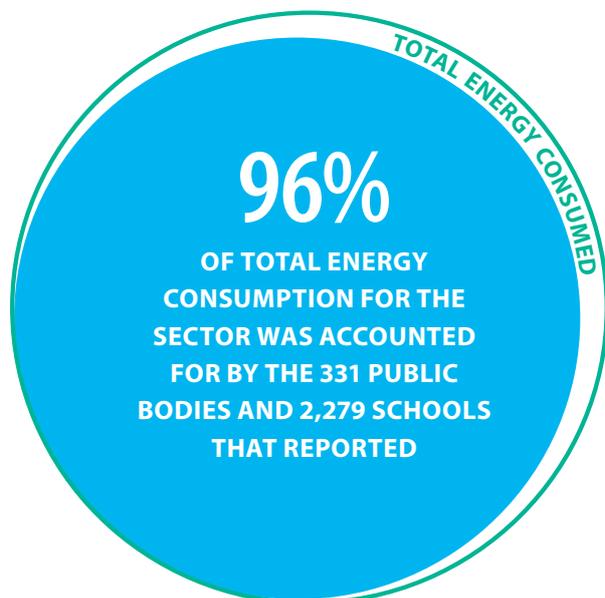
Efficiency gains have been achieved through implementation of thousands of diverse projects, ranging from structured energy management, building and facility upgrades, retrofits, changes in transportation, better energy procurement and through behavioural change in organisations.

Current Position

ENERGY EFFICIENCY IMPROVEMENT



PUBLIC BODY REPORTING RATE



1 Regulation 4 of SI 426 2014 sets out the definition of a "public body".
 2 Reporting by public bodies in Ireland is required under Regulation 5(4) of SI 426 2014. The number of public bodies that are required to report may change each year due to organisational changes in line with government policy and legislation.
 3 342 public bodies attempted to submit reports but data for eleven of these was incomplete and is not included in this report.
 4 An additional 179 schools attempted to submit reports but their data was incomplete and is not included in this report.

Key findings from the analysis of the data reported by 331 public bodies and 2,279 schools for 2017:

- Their combined total primary energy consumption was 10,248 GWh and their total energy spend was €608 million.
- This is estimated to represent 96% of the energy consumption of the sector.
- Annual primary energy savings of 3,223 GWh were achieved, which is equivalent to 667,000 tonnes of CO₂ savings.
- These savings amount to a 24% improvement on business as usual, representing €191 million in cost savings for the sector in 2017.
- The cumulative avoided CO₂ emissions since baseline amount to 3,558,000 tonnes, while the cumulative value of energy savings over the same period is €1,024 million.
- 2017 saw additional efficiency gains following the plateau observed for 2016.

While the level of reporting by public sector organisations is very strong in terms of compliance, the aim is that all public bodies' consumption, including that of all schools, will be reported in future years. The compliance rate in 2017 for public bodies was 94%, excluding schools. The compliance rate for schools of 62% is higher than that for last year (58%). It is considered a reasonable response given the technical complexity of the data requirements.

Overall, based on the data reported, the energy efficiency performance achieved for 2017 is a good result, at 24% improvement, with the resumption of additional efficiency gains. Continued proactive engagement by all public bodies and their Energy Performance Officers, utilising the structures and supports provided under the *Public Sector Energy Efficiency Strategy* will be needed to ensure the 33% target is met by end 2020. The annual M&R process is an enabling tool, providing public bodies, their Energy Performance Officers and key stakeholders with the performance information that enables strategic decision-making and actions to facilitate further progress and the achievement of the 33% efficiency target.

>€1bn and
3.56m tCO₂



CUMULATIVE SAVINGS SINCE BASELINE

Key Findings

10,248 GWh

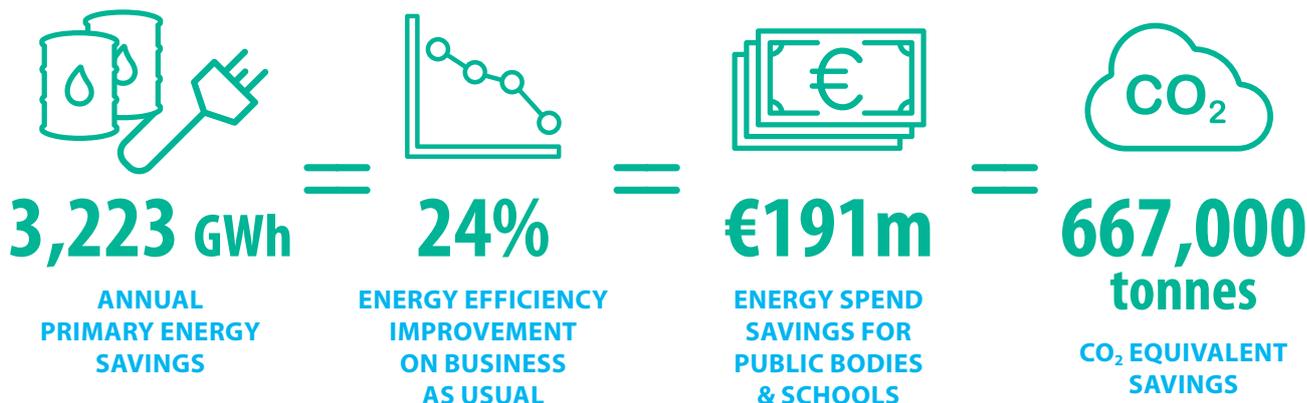
COMBINED ENERGY CONSUMPTION OF THE 331 PUBLIC BODIES AND 2,279 SCHOOLS THAT REPORTED



WHICH AMOUNTED TO A TOTAL ENERGY SPEND OF

€608m

FOR 2017, THE SAVINGS ACHIEVED WERE:



2. Background and Context

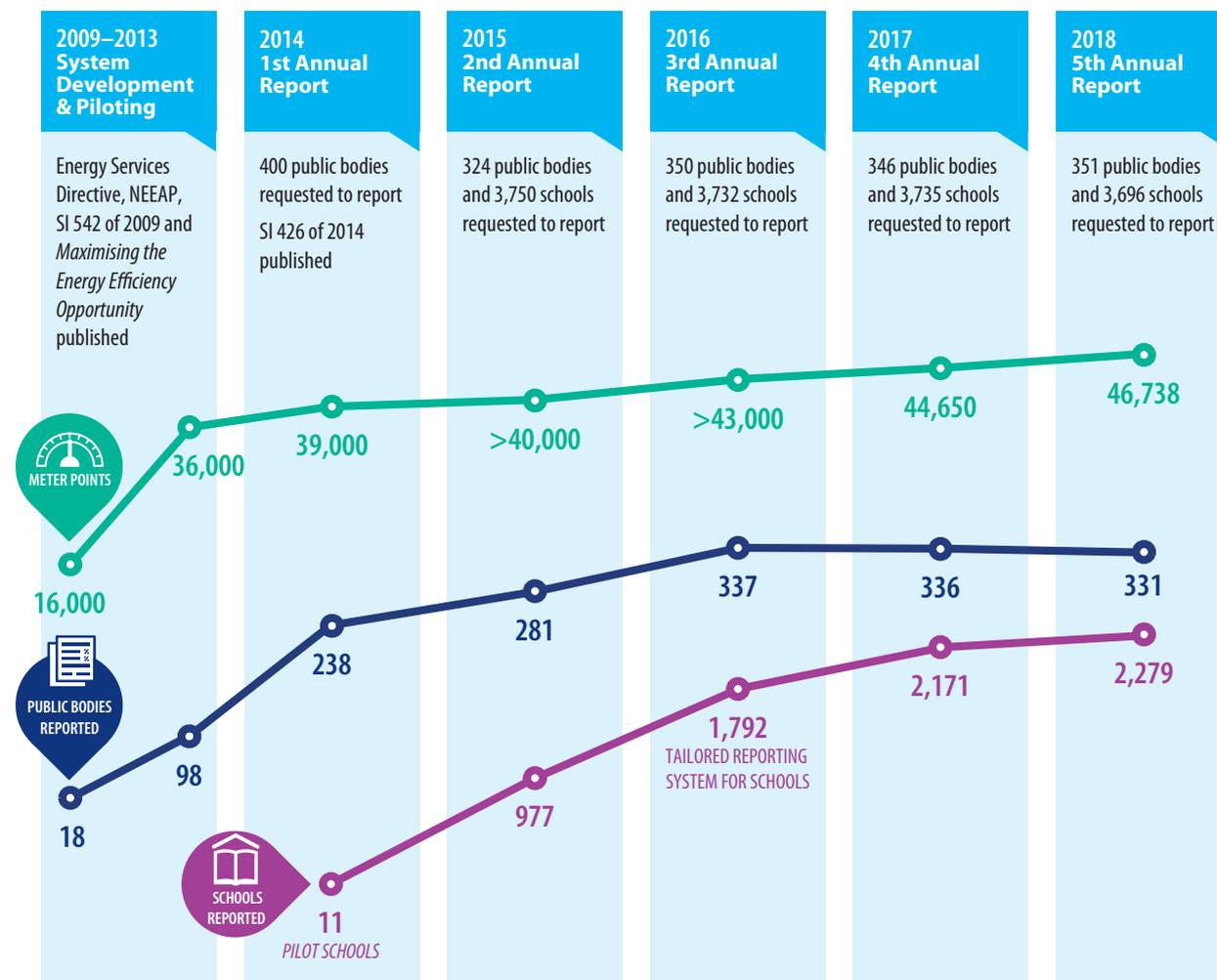
2.1 Policy and Legislative Requirements

The *Energy Efficiency Directive (EED) (2012/27/EU)*⁵ sets out the policy roadmap for the period to 2020 and brought forward legally binding measures to intensify Member States' efforts to use energy more efficiently at all stages of the energy supply chain. The *EU 2030 Climate and Energy Framework* sets out headline targets for the EU of at least a 40% domestic reduction in economy-wide greenhouse gas emissions by 2030 compared to 1990. The *Energy Efficiency Directive*, currently being revised, envisages a new EU-wide energy efficiency target of at least 32.5% by 2030, with the prospect of further upward revision of this target in 2023.

In Ireland, the *National Energy Efficiency Action Plan (NEEAP)* sets out several obligations on public bodies to lead the way in relation to energy efficiency, stating 'The public sector will improve its energy efficiency by 33% and will be seen to lead by

example — showing all sectors what is possible through strong, committed action'. Recognising the need for intensification of efforts to achieve our goals a number of steps have been taken by Government. The *Public Sector Energy Efficiency Strategy (2017)* puts in place a new governance structure, provides further guidance on energy management and enhanced supports to help public bodies achieve this target. The strategy also highlights the important leadership role the public sector has on energy efficiency. There has been a significant scaling up of investment in energy efficiency – as reflected in an approximate doubling of the capital allocation for energy efficient supports from DCCAE through SEAI, increasing to an allocation of €107m in 2018 – as well as a significant scaling up of human resources within SEAI. The scale of investment will continue to rise significantly as is

FIG. 1: PROGRESS BY PUBLIC BODIES AND SCHOOLS



⁵ This has been transposed into Irish legislation under SI 426 of 2014 *European Union (Energy Efficiency) Regulations*.

recognised in the new *National Development Plan (2018-27)* and the putting in place of the new €500 million *Climate Action Fund*.

SEAI, on behalf of DCCAE, established the M&R system to enable public bodies and schools to track their energy efficiency performance towards the 2020 targets. This system is based on the groundwork put in place since 2009 by SEAI to enable the public sector meet its energy efficiency reporting requirements. This is illustrated in Figure 1.

2.2 The Monitoring and Reporting (M&R) Process

Since 2010, public bodies have been required by Irish statute to report on their energy usage and actions taken to reduce consumption. There are two key obligations for public bodies:

- i. Requirement - under the provisions of SI 426 of 2014 – to report energy management and performance data directly to SEAI each year in order to track progress towards the 2020 target.
- ii. Requirement to publish an annual statement on energy performance. This statement must describe *‘the actions it is taking, or has taken, to improve its energy efficiency and an assessment of the energy savings arising from those actions.’*

The reporting methodology is illustrated below in Figure 2. A more detailed description is in Appendix 1.

There are two key concepts applied:

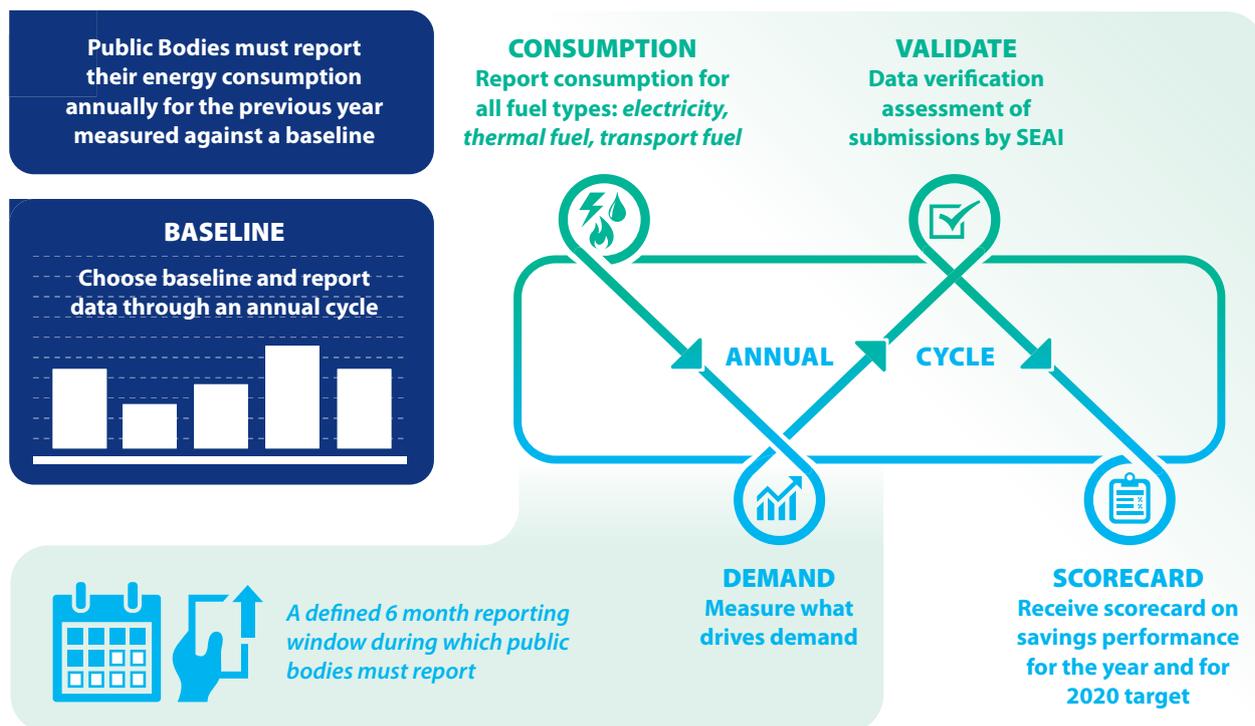
- a) Application of an activity metric so that fluctuations in an organisation's level of activity that have an impact on energy **consumption** are taken into account in determining performance, and
- b) Tracking energy performance and energy efficiency against a **baseline** so annual improvements can be assessed.

Energy efficiency improvements therefore can be assessed against a 'business as usual' scenario, and take into account organisational or infrastructural changes that impact on the energy requirements of the public body.

2.3 Water Services

Up to the end of 2013, local authorities were responsible for the provision of public water services, which accounted for approximately 40% of their combined energy consumption. The water services sector had made savings of 6.9% up to and including 2013. In January 2014, the water services assets transferred to Irish Water. In consultation with local authorities and Irish Water, SEAI developed an approach to track the energy performance of the sector before, during and after this transition. Data for local authorities and Irish Water is included within the same sub-sector in this report.

FIG. 2: HOW PUBLIC BODIES REPORT



2.4 Analysis of Reporting by Public Bodies

In Ireland the definition of 'public bodies' is broad and encompasses a wide range of organisations, including the civil service, local authorities, non-commercial state bodies/agencies, commercial state bodies and organisations in the health, justice, defence and education sectors.

In 2017 **351⁶ public bodies and 3,696 standalone schools** were requested to report data to SEAI through the 2017 reporting cycle⁷.

The public bodies and schools that were requested to report during the 2017 reporting cycle are broken down as follows:

- 351 public bodies, including 16 Education & Training Boards (ETBs), were requested to report data directly to SEAI using the reporting system. The facilities under the aegis of the ETBs, including 257 schools, were requested to report via their ETBs.
- Another 3,696 schools were requested to report directly as standalone entities.

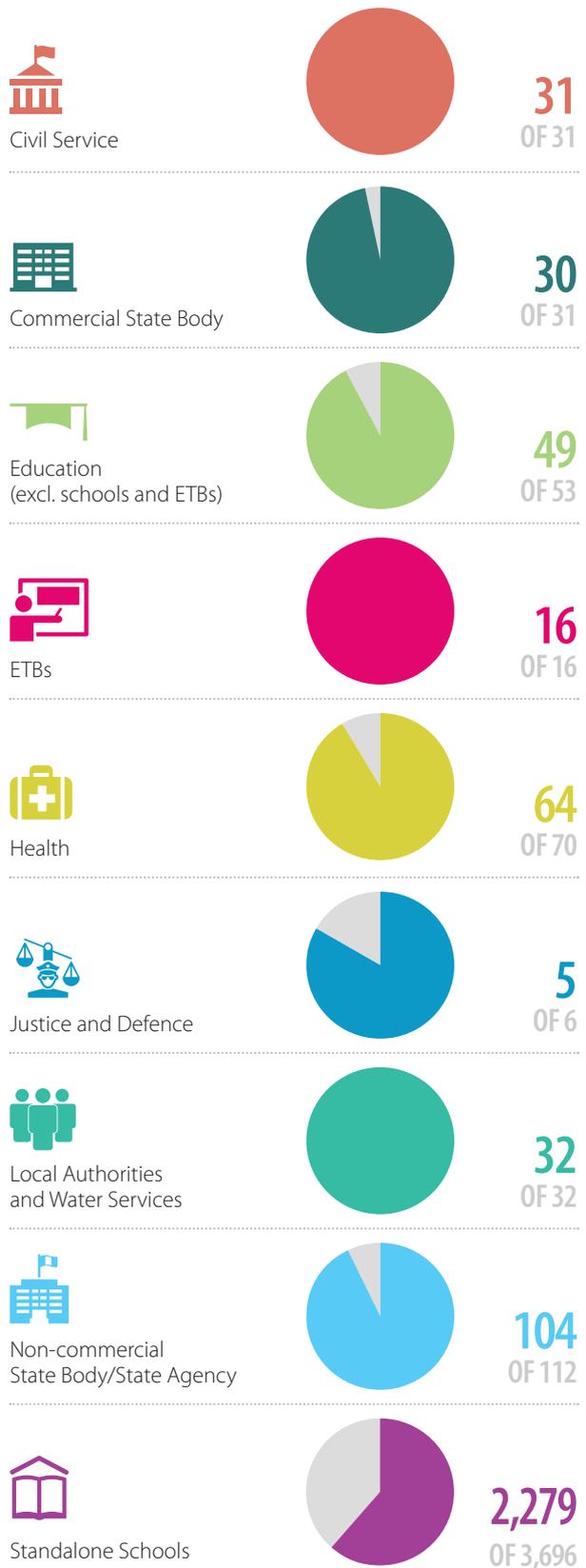
By the reporting deadline, 342⁸ public bodies and 2,458 standalone schools had made submissions to SEAI. Some of these submissions were not fully complete and are not taken into account in the analysis of the data presented in this report. The data presented in this report is an analysis of 331 complete submissions from public bodies and 2,279 from standalone schools.

The 331 complete submissions made by public bodies represents a compliance rate of 94%. SEAI estimates that the consumption of all of the organisations that reported represents over 96% of total public sector energy consumption.

Figure 3 shows the number of complete reports submitted from each sub-sector as a proportion of the total number of organisations in each sub-sector.

The consumption of the organisations that reported represents 96% of total public sector energy consumption

FIG. 3: BREAKDOWN OF SUBMISSIONS BY SUB-SECTOR



6 The number of public bodies that are required to report in Ireland may change each year due to organisational changes in line with government policy and legislation e.g. in 2015 the National Roads Authority and the Railway Procurement Agency merged to become Transport Infrastructure Ireland.
 7 In addition, a further two public bodies were requested to report but were subsequently excused from reporting as standalone entities.
 8 This figure includes 3rd level institutions and ETBs, but excludes standalone schools.

3. Analysis of Primary Energy Consumption and Energy Spend

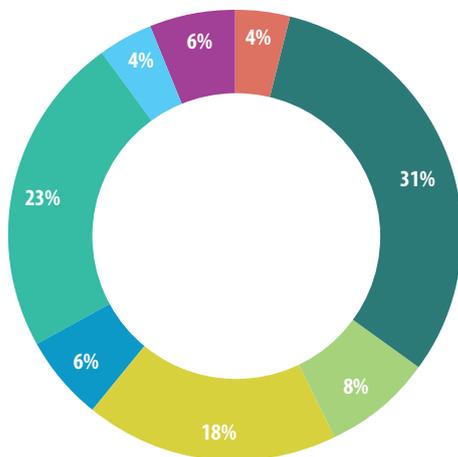
The data presented in section 3 is based on the complete reports submitted by 331 public bodies and 2,279 schools⁹.

3.1 Total Energy Consumption

The total primary energy consumption reported for 2017 was 10,248 GWh.

The sectoral breakdown of this total is shown in Figure 4.

FIG. 4: BREAKDOWN OF TOTAL ENERGY CONSUMPTION BY SUB-SECTOR (GWh)



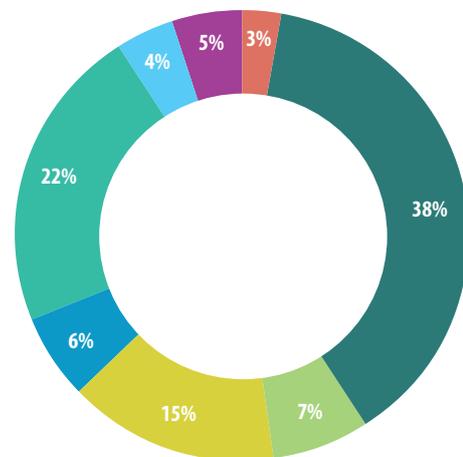
Sub-sector	2017 Energy Consumption (Primary) GWh
Civil Service	376
Commercial State Body	3,234
Education (excl. Schools & ETBs)	840
Health	1,841
Justice & Defence	589
Local Authorities & Water Services	2,338
Non-commercial State Body / State Agency	398
Schools & ETBs	632
Total	10,248

3.2 Total Energy Spend

In 2017 the total public sector energy spend was €608 million.

The sectoral breakdown of this total is shown in Figure 5.

FIG. 5: SECTORAL BREAKDOWN OF TOTAL ENERGY SPEND



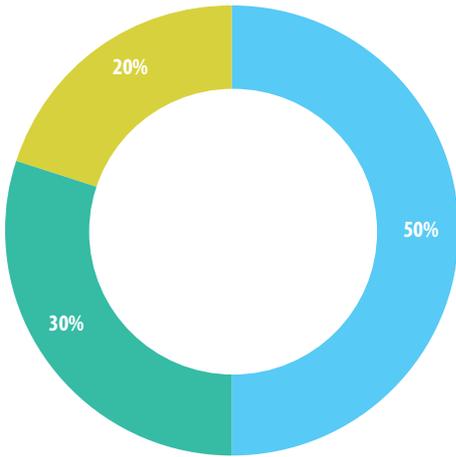
Sub-sector	2017 Energy Spend €M
Civil Service	20
Commercial State Body	231
Education (excl. Schools & ETBs)	39
Health	93
Justice & Defence	38
Local Authorities & Water Services	132
Non-commercial State Body / State Agency	22
Schools & ETBs	32
Total	608

⁹ All of the values presented in this report for energy (GWh), expenditure (€ millions) and CO₂ emissions (tonnes CO₂) have been rounded. There are minor rounding differences in some of the tabular data.

3.3 Total Energy Consumption by Fuel Type

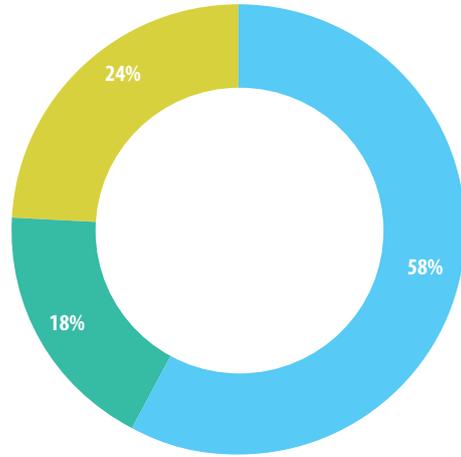
The breakdown of the 10,248 GWh of energy consumption reported for 2017 between electrical, heating (thermal) and transport is illustrated in Figure 6. The thermal and transport subtotals are broken down by fuel type in Figures 6A and 6B.

FIG. 6: CONSUMPTION SPLIT



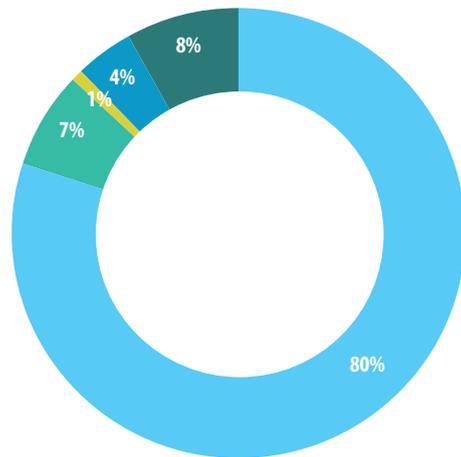
Fuel type	2017 Energy Consumption (Primary)
	GWh
Electricity	5,073
Thermal	3,086
Transport	2,090
Total	10,248

FIG. 6A: THERMAL ENERGY BREAKDOWN



Fuel	2017 Consumption (Primary)
	GWh
Natural Gas, LPG & Biogas	1,775
Heating Oils	562
Wood Fuels	749
Total	3,086

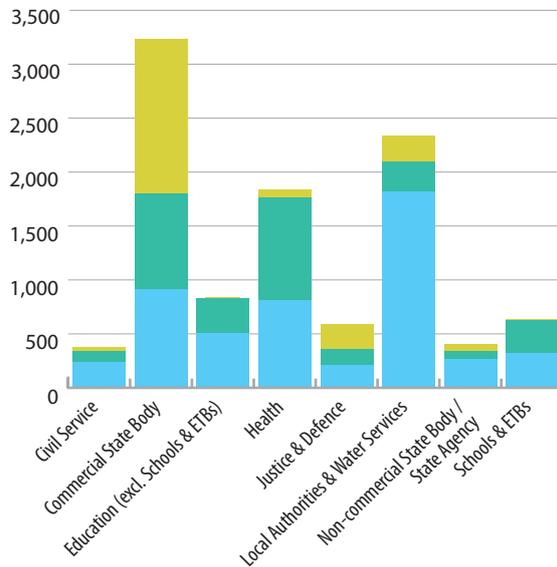
FIG. 6B: TRANSPORT ENERGY BREAKDOWN



Fuel	2017 Consumption (Primary)
	GWh
Road Diesel	1,675
Marked Diesel (Non-thermal)	148
Petrol	16
Biofuels	76
Other Transport Fuels	174
Total	2,090

The consumption patterns in the sub-sectors are illustrated in Figure 7.

FIG. 7: BREAKDOWN OF PRIMARY ENERGY CONSUMPTION BY SUB-SECTOR (GWH)

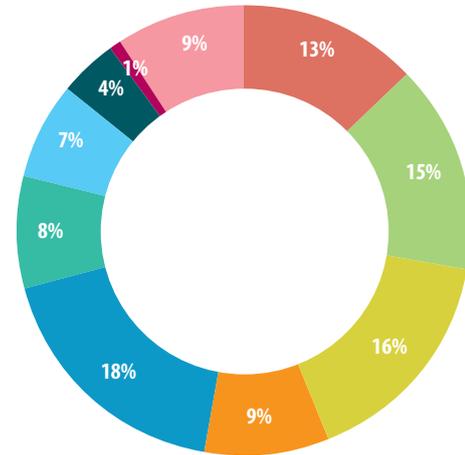


Sub-sector	2017 Energy Consumption (Primary)		
	Electricity GWh	Thermal GWh	Transport GWh
Civil Service	238	103	34
Commercial State Body	912	887	1,436
Education (excl. Schools & ETBs)	502	332	6
Health	811	948	83
Justice & Defence	208	154	227
Local Authorities & Water Services	1,820	272	245
Non-commercial State Body / State Agency	262	80	56
Schools & ETBs	319	311	2
Total	5,073	3,086	2,090

3.4 Electricity Consumption

The total electricity consumption is 5,073 GWh and is broken down in Figure 8.

FIG. 8: BREAKDOWN OF ELECTRICITY CONSUMPTION

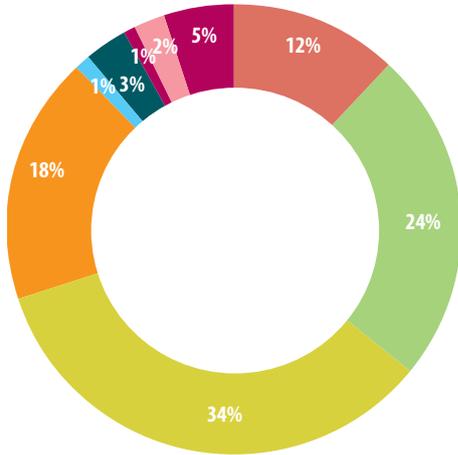


Breakdown by Use	2017 Electricity Consumption (Primary) GWh
Office Buildings	655
Education Buildings	759
Healthcare Buildings	802
Other Buildings	467
Water Services	894
Public Lighting	423
Waste & Other Processing	377
Transport	179
Other	53
Unknown	466
Total	5,073

3.5 Natural Gas Consumption

The total natural gas consumption is 1,677 GWh and is broken down in Figure 9.

FIG. 9: BREAKDOWN OF GAS CONSUMPTION



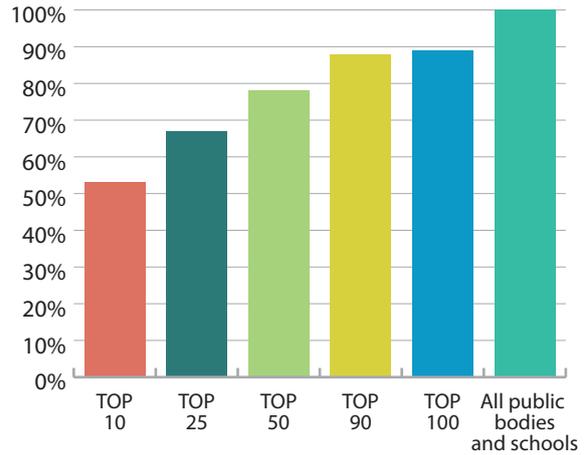
Breakdown by Use	2017 Natural Gas Consumption GWh
Office Buildings	195
Education Buildings	403
Healthcare Buildings	579
Other Buildings	297
Water Services	10
Waste & Other Processing	51
Electricity Generation	21
Other	41
Unknown	80
Total	1,677

10 public bodies account for 53% of total consumption

3.6 Main Energy Consumers

Altogether, the total primary energy consumption in 2017 of the ten largest energy consumers was 5,442 GWh, which accounts for 53% of total reported consumption. The 100 largest energy consumers that reported account for 89% of the total reported primary energy consumption.

FIG. 10: BREAKDOWN OF MAIN ENERGY CONSUMERS



Main Energy Consumers	2017 Energy Consumption (Primary) GWh
Top 10	5,442
Top 25	6,876
Top 50	8,030
Top 90	9,001
Top 100	9,141
All public bodies and schools	10,248

It is likely that improvements by the top 50 energy consumers (which account for 78% of energy consumption) will largely determine if the 33% target will be met by the sector by 2020.

The 10 largest energy consumers that reported for 2017 are set out in alphabetical order below.

- An Garda Síochána
- Bus Éireann
- Coillte Teoranta
- daa plc
- Defence Forces
- Dublin Bus
- Dublin City Council
- HSE
- Iarnród Éireann / Irish Rail
- Irish Water

4. Analysis of Energy Savings Achieved and Performance

4.1 Total Public Sector Primary Energy Savings (GWh) and Performance

The combined savings in 2017 of the public bodies and schools that submitted complete reports is 3,223 GWh¹⁰ of primary energy, as illustrated in Figure 11. This amount is equivalent to a 24% improvement compared to what the business-as-usual energy consumption would have been had these organisations maintained their baseline efficiency levels¹¹. This is the primary indicator used for tracking the sector’s progress towards the 33% target. Based on 2017 data, a 33% improvement would be equivalent to 4,446 GWh of primary energy savings.

The 3,223 GWh of annual energy savings are equivalent to 667,000 tonnes of annual CO₂ savings.

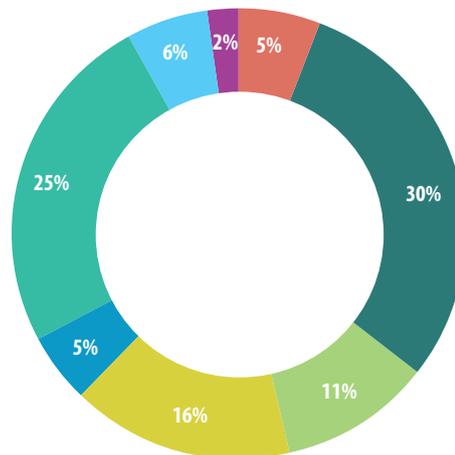
The cumulative avoided CO₂ emissions (up to 2017) since their baselines reported by the public bodies and schools that submitted complete reports amount to 3,558,000 tonnes.



667,000 tonnes

THE 3,223 GWH OF ANNUAL ENERGY SAVINGS ARE EQUIVALENT TO 667,000 TONNES OF ANNUAL CO₂ SAVINGS

FIG. 11: SOURCES OF ENERGY SAVINGS



Sub-sector	2017 Energy Savings (Primary) GWh
Civil Service	147
Commercial State Body	980
Education (excl. Schools & ETBs)	373
Health	515
Justice & Defence	165
Local Authorities & Water Services	795
Non-commercial State Body / State Agency	187
Schools & ETBs	59
Total	3,223

¹⁰ Calculated by subtracting each organisation’s actual 2017 energy consumption from its business-as-usual energy consumption. The business-as-usual energy consumption is the amount that each public body would have consumed in 2017 had it not made the reported efficiency gains since its baseline.

¹¹ The calculation of these results incorporates adjustments to the business-as-usual consumption for local authorities to account for the transition of water services to Irish Water.

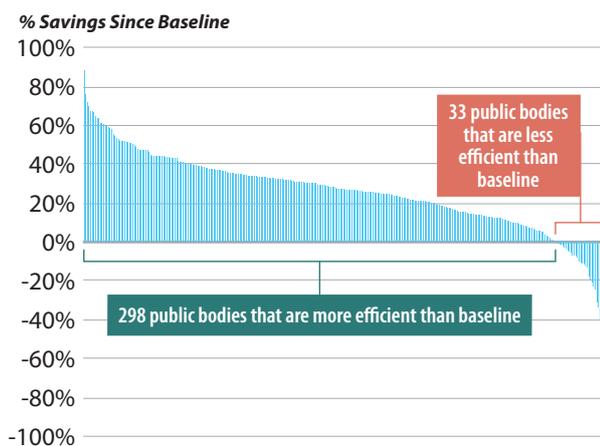
The analysis of the performance of the 331 public bodies (excluding standalone schools) that reported shows that:

- **59%** are more efficient than their baselines and are on track for their 2020 target. (Aggregate 2017 savings of 1,984 GWh, which is equivalent to 426,000 tonnes of CO₂)
- **31%** are more efficient than their baselines but are not yet on the path to the 2020 target. (Aggregate 2017 savings of 1,228 GWh, which is equivalent to 239,000 tonnes of CO₂)
- **10%** are less efficient than their baselines. (Aggregate 2017 deterioration in performance of 24 GWh, which is equivalent to 5,000 tonnes of CO₂)

Of the public bodies that reported, **90% have made improvements on their baselines.** Taking both the savings and deteriorations into account, overall improvement for the public bodies is 3,189 GWh. This is equivalent to 660,000 tonnes of CO₂.

The distribution of the performance results is shown in Figure 12.

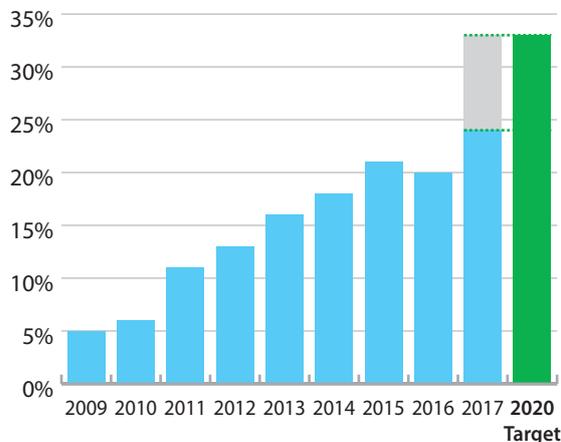
FIG. 12: OVERALL LEVEL OF IMPROVEMENT ON BASELINE



2017 Performance (all sectors)	No. Public Bodies	No. Stand-alone Schools	Total No.
>40% improvement	73	146	219
30-40% improvement	74	136	210
20-30% improvement	75	289	364
10-20% improvement	48	351	399
0-10% improvement	28	339	367
Deterioration in performance	33	1,018	1,051
Total	331	2,279	2,610

The graph in Figure 13 tracks how the total savings achieved in each year since 2009 compare to the 2020 target.

FIG. 13: ANNUAL PRIMARY ENERGY SAVINGS



Year	Saving GWh
2009	529
2010	658
2011	1,314
2012	1,468
2013	1,899
2014	2,232
2015	2,638
2016	2,632
2017	3,223

In addition to the energy efficiency improvements achieved, the absolute level of energy consumption has reduced over time. The 331 public bodies and 2,279 schools that reported data consumed **846 GWh** less primary energy in 2017 than they did in their baselines.

4.2 Analysis of Total and Cumulative Public Sector Energy Savings (€)

The value of the **energy savings** reported for 2017 is **€191 million**. As the total spend in 2017 for all of the organisations that reported data is €608 million, this represents a saving of 24% in energy costs attributable to energy efficiency improvements.

The value of the cumulative energy savings (up to 2017) since their baselines reported by the public bodies and schools that submitted complete reports is **€1,024 million**.

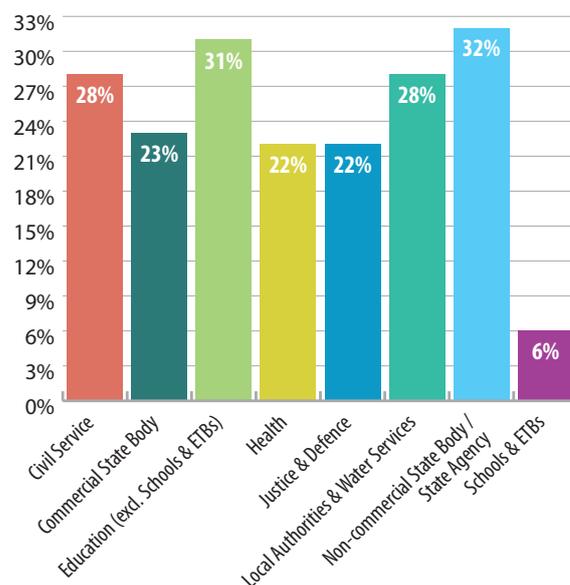


4.3 Sub-sector Primary Energy Savings (GWh)

The breakdown of savings in primary energy (GWh) and percentage improvement on 'business as usual' (BAU) by sub-sector is set out in the table in Figure 14. The equivalent CO₂ savings are also identified.

The bar chart in Figure 14 illustrates percentage savings for each sub-sector.

FIG. 14: SUB-SECTOR COMPARISON OF PERFORMANCE TO DATE (PRIMARY ENERGY SAVINGS)



Sub-sector	2017 Energy Savings (Primary)		CO ₂ Savings
	GWh	% Improvement on BAU	Tonnes (000s)
Civil Service	147	28%	31
Commercial State Body	980	23%	198
Education (excl. Schools and ETBs)	373	31%	76
Health	515	22%	109
Justice & Defence	165	22%	37
Local Authorities & Water Services	795	28%	167
Non-commercial State Body / State Agency	187	32%	38
Schools & ETBs	59	6%	12
Total	3,223	24%	667

BAU: business as usual

Making Progress

The data submitted demonstrates savings achieved through the implementation of thousands of efficiency measures. Some projects were supported by a new stream of DCCAE funding through SEAL, in partnership with the OPW and the Department of Education & Skills. Over half of the measures reported addressed **lighting, heating, building fabric and structured energy management improvements**. Projects in schools accounted for a further 20%.

The projects illustrated on these pages are a selection of the **3,540 projects** that were reported to SEAL in 2017. While the overall level of project reporting is improving, many of the efficiency measures are still relatively small scale. Organisations will need to become more proactive in both undertaking efficiency projects of scale, and reporting on them, so that others can benefit from their experience. The Energy Performance Officer network is helping to drive this and develop a project pipeline.

SEAI has created a new 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.

€8,000

Since partnering with SEAL in 2011, Cork Institute of Technology has reduced its energy consumption by 43%, and achieved ISO 50001 certification in 2017. In addition to the implementation of an energy awareness campaign for students and staff across all campuses, this was achieved through projects including the introduction of three combined heat and power (CHP) units, smart energy efficient pumps and motors, improved building services control systems and installation of smart timers on electrical equipment. Lighting has also been upgraded to LED across all facilities, including the Nexus Hall, where annual energy savings of 57,000 kWh were achieved, resulting in annual savings of €8,000 with a simple payback of 1.6 years.

Cork Institute of Technology



2,832,000 kWh

Dublin City University achieved primary energy savings of over 2.8 GWh in 2017, in addition to gaining ISO 50001 certification and launching a plan to develop a Carbon Neutral Exemplar Campus. New high efficiency boilers were installed in All Hallows Campus delivering 59% more savings than predicted. An upgrade of the existing internal and external lighting in the multi-storey carpark to LEDs, together with occupancy and daylight sensors, has also exceeded predicted savings by 19%.

Dublin City University



42,000 kWh

St John's National School Ballybrack, County Dublin undertook a significant energy retrofit in 2017, as part of an SEAI and Department of Education and Skills pilot. Works included heating upgrades to the boiler, radiators and heating controls, and installation of energy efficient lighting throughout. It is expected that this will reduce the annual energy demand in the school by 25-30%, saving 42,000 kWh each year. Apart from the energy savings, the school now has a more comfortable teaching and learning environment which has been transformative for both staff and students.

St John's National School Ballybrack



65,000 kWh

ABACAS Special School for Children with Autism in Drogheda undertook a significant energy retrofit in 2017, as part of an SEAI and Department of Education and Skills energy retrofit pilot. This project included insulation upgrades to the school roof, walls and doors, upgrades to the boiler, radiators and heating controls, as well as internal and external LED lighting. Annual energy demand is projected to reduce by 30-40%, saving 65,000 kWh of energy every year. The retrofit has also created a more comfortable, safe environment for staff and students which is in line with the education and care objectives of the school.

ABACAS Special School for Children with Autism



68,700 kWh

As part of an SEAI Communities project, Limerick and Clare Education and Training Board carried out upgrades to the lighting, building fabric and heating system at the Further Education and Training Centre in Hospital, Co. Limerick. The project included cavity wall and roof insulation, restoration of the original sash windows, and installation of a high efficiency boiler. On the lighting side, old fluorescent fixtures were replaced with LEDs and occupancy based and daylight harvesting controls were installed. The verified annual savings at the centre are 61,827 kWh for thermal and 6,834 kWh for lighting.

Limerick and Clare ETB



€29,900

An energy audit of Nenagh Government Offices, in Co Tipperary, highlighted the potential of a lighting upgrade to reduce energy consumption. The building contained over 650 light fittings, most of which were standard fluorescents with manual switching. New dimmable LED lighting with digital controls was installed, along with occupancy sensors to ensure that lights turn off when not in use. In addition to an improved lighting quality throughout the offices, electricity consumption has reduced by 175,000 kWh which is equivalent to an annual saving of more than 50%. The savings are worth approximately €29,900 per annum, with a 10 year payback on investment.

Nenagh Government Office / OPW Optimising Power @ Work



€104,000

In 2017, St. Davnet's Hospital in Monaghan upgraded its administration and education buildings from a heavy oil, steam heated system to a decentralised high efficiency LPG gas boiler and direct fired water heating system. The heating system upgrade has reduced the hospital's annual energy consumption by 1.9 GWh, a 61% reduction on previous energy demand. 30% of the funding for this project was received through SEAI's Communities Programme. The net cost of the project was €307,000 to the HSE, with annual monetary savings of €104,000 and a payback period of just under three years.

St. Davnet's Hospital, Monaghan



€79,600



In 2017, Dublin Port Company installed 346 LED light fittings and motion sensors to replace old high-pressure sodium lamps on the high masts at Dublin Port. In times of inactivity a signal is sent to the LED lighting array to reduce the lighting to 25% of full intensity, delivering even more energy savings. If the sensors detect motion, the lighting levels ramp back up to 100%. Annual energy reductions of 530,400 kWh have been achieved which is equivalent to a saving of over 70%. These savings are worth €79,600 per annum, with an approximate payback of 6 years.

Dublin Port Company



€19,500



Roscommon County Council carried out building upgrades to Roscommon, Boyle, Castlerea and Ballaghaderreen fire stations, and Monksland Civic Centre in 2017. Works included the installation of solar photovoltaic (PV) panels, upgrading heating and hot water systems and controls, replacement of light fittings to LED, cavity and attic insulation and window replacements. Projected energy consumption savings are 30% across the five buildings, equivalent to an annual cost saving of €19,500. Electricity consumption has also been reduced by 8% in Áras an Chontae, Roscommon, since the County Council joined the Optimising Power @ Work campaign in 2017, representing an annual saving of 35,000 kWh.

Roscommon County Council

5. Towards 2020

5.1 Sub-sectoral Performance

The analysis of the data reported by 331 public bodies and 2,279 schools shows that the annual energy efficiency savings at 2017 represents an overall efficiency gain of 24%.

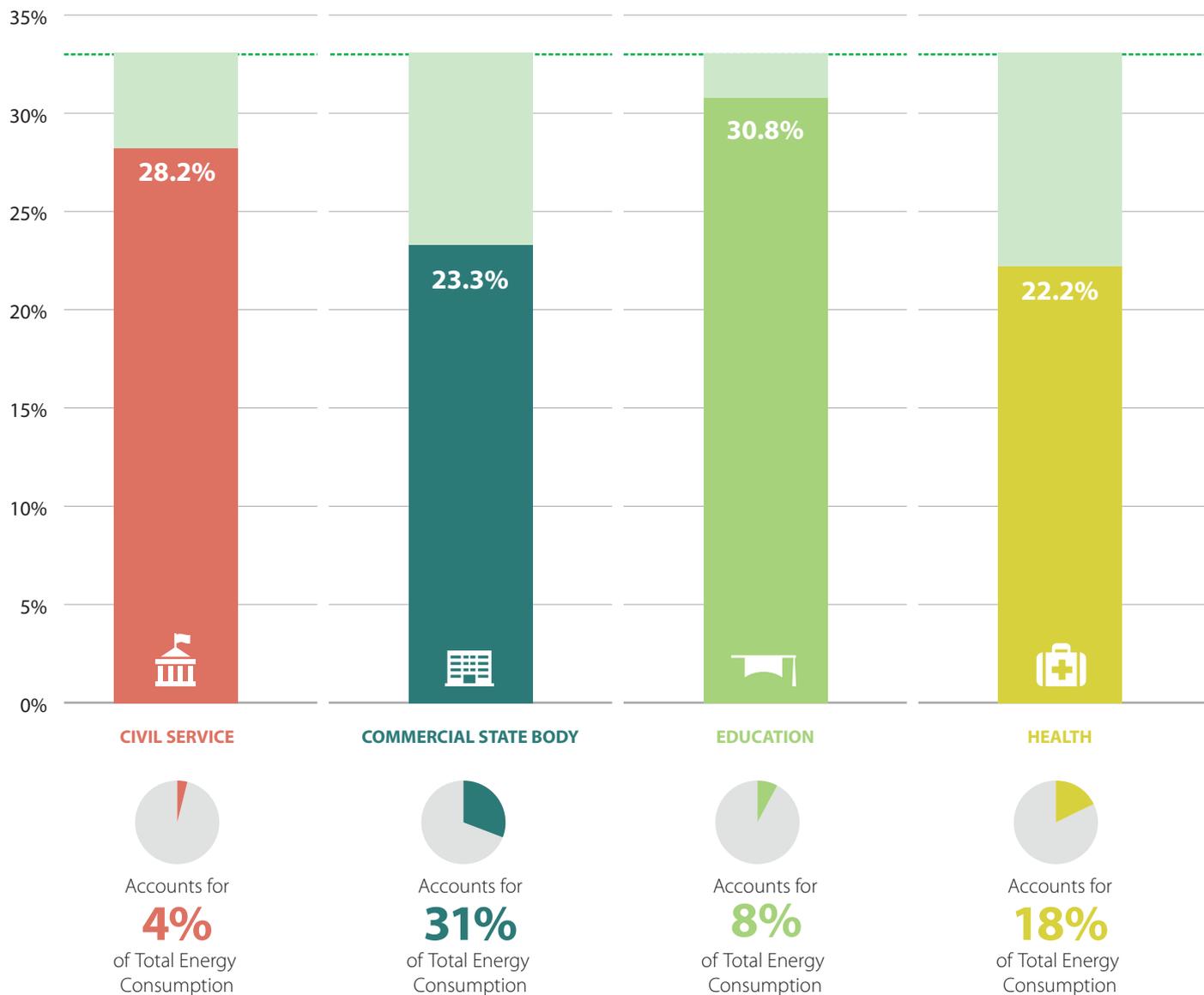
Although a 24% efficiency improvement represents a substantial saving, there are significant challenges ahead for public bodies to bridge the gap to the 2020 target.

Figure 15 illustrates the 2017 position of each sub-sector with respect to the target.

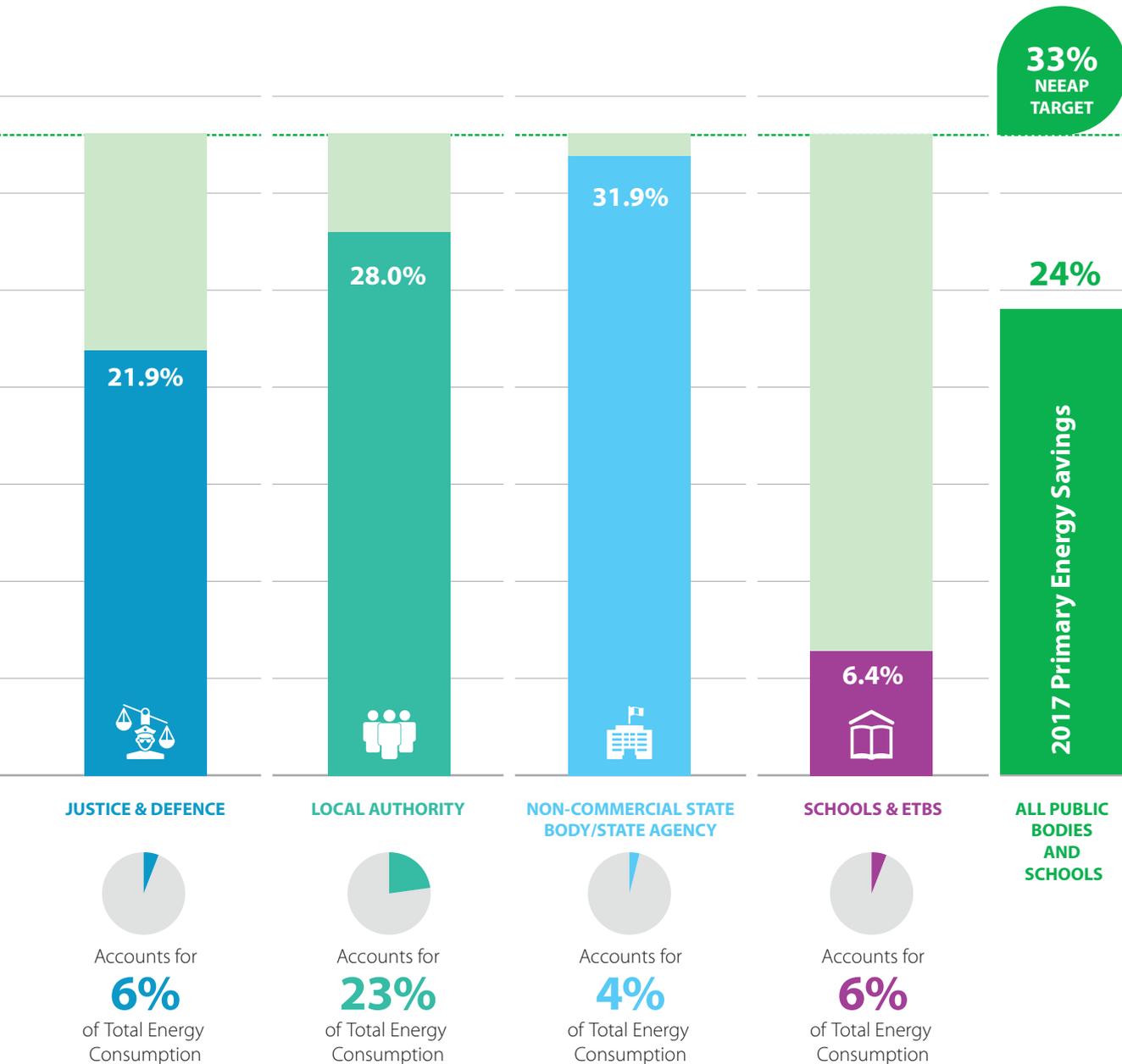
A collective effort across all sub-sectors continues to be required to meet our 2020 obligations. The M&R performance measurement system enables every organisation – regardless of its level of energy consumption – to analyse the gap to target and design strategic interventions in energy efficiency that will have the most significant impact for it.

The public sector organisations that were requested to submit reports are detailed in section 5.3.

FIG. 15: SECTORAL PERFORMANCE AGAINST 2020 NEEAP TARGET



There are significant challenges ahead for public bodies to bridge the gap to the 2020 target.



5.2 Departmental Groups

The *Public Sector Energy Efficiency Strategy* established a governance framework for achieving the 33% target based on departmental groups. Each group comprises the relevant Government Department and the bodies under its aegis.

Figure 16 gives an overview of energy use by departmental group, as well as the number of public bodies in each group, their reporting status and the level of efficiency gains made by 2017. The consumption and efficiency data shown represent the **aggregate data for all of the individual public bodies within each departmental group, including the department itself.**

FIG. 16: BREAKDOWN OF SUBMISSIONS BY DEPARTMENTAL GROUP

Departmental Group	2017 Energy Consumption (Primary)	Complete reports	Overall Status (2017)	Energy Savings Since Baseline
	% public sector			%
Agriculture, Food & the Marine	12%	9 of 9	●	14%
Business, Enterprise & Innovation	<1%	14 of 15	●	41%
Children & Youth Affairs	<1%	4 of 5	●	41%
Communications, Climate Action & Environment	4%	16 of 16	●	33%
Culture, Heritage & the Gaeltacht	<1%	15 of 17	●	32%
Defence	3%	3 of 3	●	24%
Education & Skills	10%	73 of 79	●	27%
– Standalone Schools	4%	2,279 of 3,696	●	5%
Employment Affairs & Social Protection	<1%	3 of 3	●	33%
Finance	2%	9 of 10	●	24%
Foreign Affairs & Trade	<1%	1 of 1	●	38%
Health	18%	72 of 78	●	22%
Housing, Planning & Local Government	11%	11 of 12	●	23%
– Local Authorities	12%	31 of 31	●	23%
Justice & Equality	4%	20 of 21	●	20%
Public Expenditure & Reform	<1%	9 of 9	●	39%
Rural & Community Development	<1%	3 of 4	●	36%
Taoiseach	<1%	8 of 8	●	29%
Transport, Tourism & Sport	17%	30 of 30	●	27%

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:

●	●	●
More efficient than baseline and on track for 2020 target	More efficient than baseline, but not yet on the path for 2020 target	Less efficient than baseline

5.3 Performance of Public Bodies

SEAI recognises that building a complete energy profile for organisations is an iterative process that will take time as public bodies are in a better position to submit improved data each year. This work is ongoing.

SEAI continues to work with public bodies and schools to improve the quality of their data through the provision of guidance materials, training and bespoke support services.

The public bodies and schools are listed as follows:

Public Bodies (Excluding Schools)

The 331¹² public bodies that made a complete submission to SEAI by the deadline are alphabetically listed in three groups according to their level of energy consumption, as follows:

- **Group 1: Energy consumption greater than 50 GWh**
This includes 34 public sector organisations, which account for 72% of total reported energy consumption.
- **Group 2: Energy consumption between 5 and 50 GWh**
This includes 123 public bodies, which account for 22% of total reported energy consumption.
- **Group 3: Energy consumption less than or equal to 5 GWh**
This includes 174 public bodies, which account for 2% of total reported energy consumption.

Non-reporting Public Bodies

The public bodies that did not report are listed alphabetically in section 5.3.2.

Standalone Schools

The 2,279 standalone schools that made complete submissions to SEAI by the deadline account for 4% of total reported energy consumption. They are listed in an Annex to this report, which is available at www.seai.ie/publicsectorreport.

Additional Detailed Data

SEAI has created a new 'M&R results' section on its website to publish public sector energy data, including detailed organisation-level energy consumption and performance data, and a database of energy-saving projects. This is available at www.seai.ie/publicsector.

12 Including ETBs but excluding standalone schools.

5.3.1 Public Bodies (Excluding Schools)

GROUP 1 PUBLIC BODIES: ENERGY CONSUMPTION GREATER THAN 50 GWh

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
An Garda Síochána	●	25.4%
An Post	●	9.4%
Beaumont Hospital	●	12.3%
Bus Éireann	●	1.7%
Coillte Teoranta	●	13.1%
Cork County Council	● ³	20.8%
daa plc	●	44.1%
Defence Forces	●	24.1%
Department of Agriculture, Food & Marine	●	20.6%
Department of Employment & Social Protection	●	32.4%
Donegal County Council	● ³	5.2%
Dublin Bus	●	14.1%
Dublin City Council	● ³	29.8%
Dublin City University	●	35.3%
Dún Laoghaire-Rathdown County Council	● ³	28.2%
Electricity Supply Board	●	31.6%
Fingal County Council	● ³	30.3%

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
HSE	●	20.9%
Iarnród Éireann / Irish Rail	●	33.8%
Irish Prison Service	●	8.7%
Irish Water	● ^{3a}	22.4%
Mater Misericordiae University Hospital	● ²	30.1%
National University of Ireland, Galway	●	34.0%
Office of Public Works	●	21.1%
Raidió Teilifís Éireann	●	43.8%
Revenue Commissioners	●	18.7%
South Dublin County Council	● ³	25.4%
St. James's Hospital	● ²	23.4%
St. Vincent's University Hospital	● ²	28.7%
Transport Infrastructure Ireland	●	20.9%
Trinity College Dublin	●	26.3%
University College Cork	●	36.6%
University College Dublin	●	30.4%
University of Limerick	●	21.9%

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:



Note 1
Public body submitted sufficient data to calculate a savings result for 2017; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2
Aspects of the reported data to be addressed to improve data quality and verification.

Note 3
Each local authority's result includes the performance of water services assets up to and including 2013, but excludes water services since then.

Note 3a
Irish Water's energy performance is calculated on the basis of the water services assets' performance since 2009. These assets were owned and operated by local authorities up to the end of 2013, during which time the water services sector had improved its performance by 6.9%. The savings figure may be revised in future years as the local authorities, Irish Water and SEAI continue to work together to improve the quality and quantity of energy data, including historical data.

GROUP 2 PUBLIC BODIES: ENERGY CONSUMPTION 5 – 50 GWH

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
Adelaide and Meath Hospital, Incorporating the National Children's Hospital	●	26.6%
Athlone Institute of Technology	● ²	25.8%
Bord na Móna plc	●	60.4%
Brothers of Charity Services Ireland	●	26.7%
Campmill Communities (Ireland)	● ¹	
Cappagh National Orthopaedic Hospital	●	34.5%
Carlow County Council	● ³	26.3%
Cavan & Monaghan Education & Training Board	●	1.0%
Cavan County Council	● ³	17.3%
Central Bank of Ireland	●	23.8%
Cheeverstown House	●	9.9%
Children's University Hospital	●	14.9%
City of Dublin Education & Training Board	●	12.6%
Clare County Council	● ³	17.8%
Commission for Communication Regulation	●	21.0%
Commissioners of Irish Lights	●	38.9%
Coombe Women & Infants University Hospital	●	5.4%
Cope Foundation	●	13.7%
Cork Airport	●	44.1%
Cork City Council	● ³	27.8%
Cork Education & Training Board	●	8.1%
Cork Institute of Technology	●	43.7%
Courts Service	●	10.4%
Daughters of Charity – Intellectual Disability Services	●	11.9%
Department of Education & Skills	●	26.1%
Department of Finance	●	11.1%
Department of Foreign Affairs & Trade	●	38.1%
Department of Housing, Planning & Local Government	●	24.5%

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
Department of Justice & Equality	●	32.4%
Department of Public Expenditure and Reform	●	76.0%
Department of Transport, Tourism & Sport	●	12.3%
Donegal Education & Training Board	● ²	-44.0%
Dublin & Dún Laoghaire Education & Training Board	●	15.7%
Dublin Institute of Technology	●	29.0%
Dublin Port Company	●	24.3%
Dún Laoghaire Institute of Art, Design & Technology	●	-1.2%
Dundalk Institute of Technology	●	11.8%
EirGrid Plc	●	34.0%
Enable Ireland	●	32.9%
Enterprise Ireland	●	48.7%
Environmental Protection Agency	●	32.9%
Galway City Council	● ³	30.3%
Galway County Council	● ³	21.8%
Galway Mayo Institute of Technology	●	27.2%
Galway Roscommon Education & Training Board	●	19.9%
Gas Networks Ireland	●	42.6%
Houses of the Oireachtas Service	●	25.5%
IDA Ireland	●	55.1%
Inland Fisheries Ireland	●	17.3%
Institute of Technology Blanchardstown	● ²	59.9%
Institute of Technology Carlow	●	37.3%
Institute of Technology Sligo	●	26.8%
Institute of Technology Tallaght	●	33.7%
Institute of Technology Tralee	●	36.0%
Irish Aviation Authority	●	26.7%
Irish Blood Transfusion Service	●	28.8%
Irish Greyhound Board / Bord na gCon	●	32.2%
Irish Wheelchair Association	● ²	33.8%

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:



More efficient than baseline and on track for 2020 target



More efficient than baseline, but not yet on the path for 2020 target



Less efficient than baseline

Note 1

Public body submitted sufficient data to calculate a savings result for 2017; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2

Aspects of the reported data to be addressed to improve data quality and verification.

Note 3

Each local authority's result includes the performance of water services assets up to and including 2013, but excludes water services since then.

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
Kerry County Council	● ³	29.4%
Kerry Education & Training Board	●	19.0%
Kildare & Wicklow Education & Training Board	●	43.1%
Kildare County Council	● ³	20.0%
Kilkenny & Carlow Education & Training Board	●	15.1%
Kilkenny County Council	● ³	26.8%
Laois & Offaly Education & Training Board	●	-0.3%
Laois County Council	● ³	36.9%
Leitrim County Council	● ²	31.5%
Letterkenny Institute of Technology	●	46.8%
Limerick & Clare Education & Training Board	●	19.2%
Limerick City & County Council	● ³	18.2%
Limerick Institute of Technology	●	34.8%
Longford & Westmeath Education & Training Board	● ²	39.8%
Longford County Council	● ³	33.0%
Louth & Meath Education & Training Board	●	-11.2%
Louth County Council	● ³	43.3%
Marine Institute	●	27.3%
Mary Immaculate College Limerick	●	24.2%
Marymount University Hospital and Hospice	●	61.1%
Maynooth University, NUIM	●	19.9%
Mayo County Council	● ^{2&3}	21.2%
Mayo Sligo & Leitrim Education & Training Board	● ²	-65.7%
Meath County Council	● ³	13.8%
Mercy Hospital	●	32.1%
Milford Care Centre	●	-20.9%
Monaghan County Council	● ³	26.9%
Muiriosa Foundation	●	43.5%
National Gallery	●	44.4%
National Learning Network Ltd.	●	-10.4%
National Maternity Hospital	● ²	7.8%

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
National Museum of Ireland	●	14.7%
National Rehabilitation Hospital	● ¹	
Offaly County Council	● ³	25.0%
Our Lady's Children's Hospital Crumlin	●	24.9%
Our Lady's Hospice Harold's Cross Limited	●	18.0%
Peamount Hospital Newcastle	●	12.7%
Permanent TSB	●	24.5%
Port of Cork Company	●	29.8%
RehabCare	● ²	-24.6%
Roscommon County Council	● ³	22.8%
Rotunda Hospital	●	13.2%
Royal College of Surgeons in Ireland	●	32.7%
Royal Hospital	●	-3.8%
Saint John of God Community Services clg	●	0.8%
Shannon Airport Authority DAC.	●	22.5%
Sligo County Council	● ²	7.7%
South Infirmary - Victoria Hospital	● ²	-12.4%
Sport Ireland	●	59.0%
St. Michael's Hospital	●	9.6%
State Laboratory	●	29.8%
Stewarts Care Ltd	●	21.0%
Teagasc	●	5.1%
The Irish Museum of Modern Art	●	21.1%
Tipperary County Council	● ³	46.0%
Tipperary Education & Training Board	●	14.3%
Voluntary Health Insurance Board	●	39.0%
Waterford & Wexford Education & Training Board	●	-17.9%
Waterford City & County Council	● ³	16.1%
Waterford Institute of Technology	●	41.2%
Waterways Ireland	●	6.4%
Western Care Association	●	29.9%
Westmeath County Council	● ³	15.1%
Wexford County Council	● ³	26.2%
Wicklow County Council	● ³	11.3%

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:



More efficient than baseline and on track for 2020 target



More efficient than baseline, but not yet on the path for 2020 target



Less efficient than baseline

Note 1

Public body submitted sufficient data to calculate a savings result for 2017; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2

Aspects of the reported data to be addressed to improve data quality and verification.

Note 3

Each local authority's result includes the performance of water services assets up to and including 2013, but excludes water services since then.

GROUP 3 PUBLIC BODIES: ENERGY CONSUMPTION LESS THAN OR EQUAL TO 5 GWH

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
Abbey Theatre	●	25.4%
Ability West	●	31.2%
Adoption Authority of Ireland	●	27.9%
AHEAD	●	31.4%
An Bord Pleanála	●	47.0%
An Foras Teanga – Ulster Scots Agency	●	24.4%
Arts Council	●	13.4%
Athlone Education Centre	●	31.3%
Bantry Bay Port Company Ltd	● ²	-10.7%
Blackrock Education Centre	●	49.7%
Bord Bia	●	67.0%
Bord Iascaigh Mhara	●	6.9%
Broadcasting Authority of Ireland	●	31.5%
Carrick-on-Shannon Education Centre	● ²	39.2%
Carriglea Cáirde Services	●	20.4%
Central Statistics Office	●	34.0%
Charities Regulator	● ²	47.6%
Cheshire Ireland	● ²	58.2%
Chief State Solicitor's Office	●	28.1%
Children's Sunshine Home/Laura Lynn	●	20.2%
Citizens Information Board	●	43.6%
Clare Education Centre	●	25.6%
Co. Wexford Education Centre	●	26.4%
Cobh Community Hospital	●	5.8%
Commission for Aviation Regulation	●	28.8%
Commission for Railway Regulation	●	87.9%
Commission for the Regulation of Utilities	●	59.2%
Companies Registration Office & Registrar of Friendly Societies	● ²	0.2%
Competition and Consumer Protection Commission	●	36.9%
Cork Education Support Centre	●	3.6%
CORU	● ¹	
Crawford Art Gallery Cork	● ²	16.4%
Data Protection Commissioner	●	-6.9%
Daughters of Charity – Child & Family Services	●	37.5%

Public Body	Overall Status (2017)	Energy Savings Since Baseline
		%
Dental Council	● ¹	
Department of Children & Youth Affairs	●	47.0%
Department of Communications, Climate Action & Environment	●	51.8%
Department of Culture, Heritage & the Gaeltacht	●	63.4%
Department of Defence	●	25.4%
Department of Health	●	17.8%
Department of Jobs, Enterprise & Innovation	●	42.9%
Department of the Taoiseach	●	14.2%
Design & Crafts Council of Ireland	● ²	-19.5%
Digital Hub Development Agency	●	5.4%
Donegal Education Centre	● ²	13.5%
Donegal Regional Airport	●	-2.0%
Drogheda Port Company	●	69.4%
Drumcondra Education Centre	●	37.3%
Dublin Dental Hospital & School	● ²	30.8%
Dublin Institute for Advanced Studies	●	35.6%
Dublin West Education Centre	●	11.7%
Dun Laoghaire Harbour Company	●	37.7%
Economic and Social Research Institute (ESRI)	●	-11.5%
Education Centre Tralee	●	26.3%
Ervia (Shared Services)	●	6.8%
Fáilte Ireland	●	43.6%
Financial Services Ombudsman	●	50.3%
FOLD Ireland	● ²	-4.9%
Food Safety Authority of Ireland	●	9.0%
Forensic Science Laboratory	●	20.6%
Foyle, Carlingford and Irish Lights Commission	●	29.9%
Galway Education Centre	● ²	36.0%
Garda Inspectorate	●	32.0%
Garda Ombudsman Commission	●	34.6%
Good Shepherd Services	●	2.7%
Grangegorman Development Agency	● ¹	
Health & Safety Authority	●	30.4%
Health Products Regulatory Authority	● ²	33.7%

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:

●	●	●
More efficient than baseline and on track for 2020 target	More efficient than baseline, but not yet on the path for 2020 target	Less efficient than baseline

Note 1

Public body submitted sufficient data to calculate a savings result for 2017; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2

Aspects of the reported data to be addressed to improve data quality and verification.

Public Body	Overall Status (2017)	Energy Savings Since Baseline %
Heritage Council	● ²	60.8%
Higher Education Authority Irish Research Council	●	40.9%
Horsereading Ireland Ltd	●	33.2%
Housing Finance Agency	●	28.4%
Incorporated Orthopaedic Hospital of Ireland	●	47.0%
Inishowen Development Partnership	●	17.1%
Inspector of Prisons and Places of Detention	●	-40.0%
Institute of Public Administration	●	-3.1%
InterTradelreland	●	12.5%
Irish Film Classification Office	●	-13.3%
Irish Human Rights & Equality Commission	●	50.9%
Irish Water Safety	●	64.2%
KARE	●	2.5%
Kildare Education Centre	●	32.4%
Kilkenny Education Centre	● ²	-1.7%
Laois Education Centre	● ²	51.7%
Law Reform Commission	● ²	41.0%
Legal Aid Board	●	22.2%
Leopardstown Park Hospital	● ¹	
Limerick Education Centre	●	-23.0%
Medical Bureau of Road Safety	●	32.9%
Mental Health Commission	●	32.5%
Met Éireann	●	9.6%
Monaghan Education Centre	●	-1.3%
National Archives	●	46.8%
National Cancer Registry Board	● ²	14.1%
National College of Art and Design	● ²	40.4%
National Council for Special Education	●	12.1%
National Disability Authority	●	35.3%
National Economic and Social Development Office	●	39.1%
National Library of Ireland	● ²	30.3%
National Milk Agency	●	-5.5%
National Oil Reserves Agency	●	52.8%
National Transport Authority	●	51.4%
National Treasury Management Agency	●	63.4%

Public Body	Overall Status (2017)	Energy Savings Since Baseline %
National Treatment Purchase Fund	● ²	33.5%
Navan Education Centre	●	34.5%
NCCA (National Council for Curriculum and Assessment)	●	43.9%
New Ross Port Company	●	20.0%
Northern & Western Regional Assembly	●	30.4%
NSAI	●	13.4%
Office of the Attorney General	●	23.6%
Office of the Comptroller & Auditor General	●	24.1%
Office of the Director of Corporate Enforcement	● ²	-31.1%
Office of the Director of Public Prosecutions	●	51.6%
Office of the Ombudsman	●	33.7%
Office of the Ombudsman for Children	●	15.1%
Office of the Ombudsman for the Defence Forces	● ²	31.9%
Oifig an Choimisinéara Teanga	●	22.8%
Ordnance Survey Ireland	●	5.1%
Personal Injuries Assessment Board	●	53.2%
Port of Galway	● ²	42.7%
Port of Waterford Company	●	71.7%
Pre-Hospital Emergency Care Council	● ²	42.8%
President's Establishment	●	8.6%
Private Security Authority	●	15.0%
Probation Service agency of Dept of Justice & Equality	●	16.9%
Professional Development Service for Teachers	● ²	46.8%
Property Service Regulatory Authority	●	43.8%
PSI – the Pharmacy Regulator	●	39.7%
Public Appointment Service	●	54.4%
Quality and Qualifications Ireland	●	66.4%
Regulator of the National Lottery	● ¹	
Residential Tenancies Board	● ²	35.3%
Road Safety Authority	●	-4.4%
Royal Irish Academy of Music	● ²	10.7%
Royal Victoria Eye and Ear Hospital	●	36.8%
safefood	●	24.8%

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:



More efficient than baseline and on track for 2020 target



More efficient than baseline, but not yet on the path for 2020 target



Less efficient than baseline

Note 1

Public body submitted sufficient data to calculate a savings result for 2017; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2

Aspects of the reported data to be addressed to improve data quality and verification.

Public Body	Overall Status (2017)	Energy Savings Since Baseline %
Science Foundation Ireland	● ²	12.3%
Sea Fisheries Administration Division	●	29.1%
Sea Fisheries Protection Authority	● ²	40.4%
Shannon Commercial Properties	●	50.5%
Shannon Foynes Port Company	●	32.2%
Sligo Education Centre	● ²	-33.7%
SOLAS	●	30.1%
SOS Kilkenny Ltd.	●	35.4%
Southern Regional Assembly	●	36.0%
Special EU Programmes Body	●	40.3%
St Josephs Foundation	● ¹	
St. Angela's College Sligo	●	26.2%
St. Christopher's Services Ltd.	●	43.8%
St. Cronan's Association CLG	● ²	57.7%
St. Francis Hospice	●	29.2%
St. John's Hospital	●	26.6%
St. Michael's House	● ¹	
St. Vincent's Hospital Fairview	●	-8.1%
State Examinations Commission	●	12.0%
Sunbeam House Services	● ²	67.0%
Sustainable Energy Authority of Ireland	●	50.9%
Teaching Council	●	37.4%
TG4	●	38.1%
The Health Information & Quality Authority (HIQA)	●	40.6%
The Health Insurance Authority	●	34.9%
The Health Research Board	●	50.3%
The Insolvency Service of Ireland	●	31.8%
The Irish Film Board	● ²	33.0%
The Medical Council	●	24.9%
The Pensions Authority	● ²	39.4%
The Property Registration Authority	● ¹	
Tourism Ireland	●	37.3%
Údarás na Gaeltachta	●	38.7%
Valuation Office	●	7.2%
Valuation Tribunal	● ¹	
Waterford Teachers' Centre	●	-6.9%
Western Development Commission	●	-7.1%
Workplace Relations Commission	●	9.4%

5.3.2 Non-reporting Public Bodies

The number of public bodies that are required to report in their own right changes from year to year due to organisational changes within the sector. Some smaller organisations that were requested to report for 2017 did not report data in their own right, but their data was reported via 'parent' organisations, while others may no longer come under the definition of a public body, as set out in SI 426 of 2014. Such organisations are not listed here. These organisational changes are the subject of continual review by SEAI.

An Foras Teanga – Foras na Gaeilge
Central Remedial Clinic
Educampus Services
Labour Court
Léargas – The Exchange Bureau
Legal Services Regulatory Authority
Local Government Management Agency
Mayo Education Centre
Nua Healthcare Services
Nursing and Midwifery Board of Ireland
Pobal
Royal Irish Academy
St. Catherine's Association Ltd.
St. Patrick's Centre Kilkenny
The Bessborough Centre
The National Concert Hall
West Cork Education Centre

The overall status of energy efficiency improvement on baseline for 2017 is illustrated as follows:

			Note 1	Note 2
More efficient than baseline and on track for 2020 target	More efficient than baseline, but not yet on the path for 2020 target	Less efficient than baseline	Public body submitted sufficient data to calculate a savings result for 2017, however the result lies beyond the expected range of probable energy performance and needs verification.	Aspects of the reported data to be addressed to improve data quality and verification.

Appendix 1 – Reporting Methodology

The key principles of the reporting methodology are:

- Individual public bodies report annually for the previous year. There is a defined reporting window during which public bodies must report and the cycle repeats annually.
- Public bodies report all of their energy consumption for all fuel types (electricity, thermal fuels and transport fuels) at an organisational level.
- Public bodies report baseline data on a once-off basis.
- Public bodies then report their energy consumption annually for the previous year.
- For electricity & natural gas, public bodies submit their meter numbers once to SEAI (MPRNs & GPRNs) and then validate them annually. SEAI accesses the energy consumption data corresponding to these meter numbers directly from the regulated meter operators (ESB MRSO and Gas Networks Ireland) each year.
- For all non-network-connected energy sources (e.g. heating oils, LPG, solid fuels, diesel), public bodies self-report their consumption subtotals directly to SEAI.
- Each year, each public body must self-report a value for an activity metric that best corresponds with its energy usage.

The next reporting cycle will commence in early December 2018. All public bodies will be required to report their 2018 consumption before the cycle ends in early May 2019; they will also have the opportunity to review/edit their previously reported data.

Measuring Energy Savings

In order to quantify energy savings, changes in given parameters that are related to energy use must be measured. The SEAI system uses energy performance indicators (EnPIs) to measure each organisation's energy performance. This enables organisations to determine how efficiently they are using energy because it accounts for changes in the activity level related to the energy use – or 'activity metric' – of each organisation.

Each year, an EnPI is calculated by dividing the organisation's total primary energy requirement (TPER) by an activity metric.

The primary indicator for tracking each organisation's energy savings is the change in the organisation's EnPI each year and is expressed as a percentage saving between a baseline period and the current year (i.e. 2017). This is a workable methodology which accounts for an organisation's energy performance as well as its energy consumption and enables public bodies to determine if energy is being used efficiently or not in accordance with the definitions of 'energy efficiency' and 'energy savings' used by the European Commission.

Baselines

The progress made by an organisation in meeting its 2020 target is measured against a historical baseline. Organisations have a choice of baseline period. Public bodies can choose whichever of the following baseline periods suits them best: 2001-2005 (averaged); 2006-2008 (averaged); 2009 (single year). 2009 is the default baseline for public bodies. Schools can choose any of these baselines, or any single year up to and including 2013 (default).

Data Verification

The validity of submitted data is checked in two ways:

- Automated Data Verification Assessment (DVA), which consists of validation rules built into the reporting software to check for errors when entering inputs.
- DVAs undertaken by SEAI-appointed assessors, which entail assessments of specific aspects of submissions. A DVA of a public body's submission consists of direct interaction(s) between an SEAI assessor and the public body to verify that the data submitted falls within certain acceptability criteria.

The purpose of the data verification system is threefold:

- To ensure, insofar as practical, that the data which is submitted is robust and verifiable;
- To provide an incentive for organisations to submit accurate data;
- To provide a means for supporting organisations in improving how they gather and submit M&R data and for providing feedback on the M&R system.

The data verification process on the 2017 data involved an assessment of 41% of public bodies that reported data.

SEAI would like to thank the meter registration system operators of ESB Networks and Gas Networks Ireland for their continued support in providing the data required to measure and monitor energy efficiency.

For more information on
Monitoring and Reporting,
visit www.seai.ie/publicsector
or contact publicsector@seai.ie

Appendix 2 – Glossary

Activity Metric

A measure of the activity that a public body undertakes. Ideally, the activity metric should quantify the key activities that affect energy use, e.g. for organisations in which most of the energy consumption is in buildings, good activity metrics are: the total useful floor area that is heated or air conditioned; the number of people that benefit from the energy service provided (e.g. number of employees for office-based organisations, number of students for universities etc.)

Baseline

The period from which an organisation's progress towards the 2020 target is tracked. There are three alternative baselines for public bodies. Public bodies can choose whichever one suits them best: 2001-2005 (averaged); 2006-2008 (averaged); 2009 (single year). 2009 is the default baseline. Schools can choose any of these baselines, or any single year up to and including 2013 (default).

EnPI

An Energy Performance Indicator (EnPI) is a way of measuring an organisation's energy performance. Each year, an EnPI is calculated by dividing the organisation's total primary energy requirement (TPER) by an activity metric.

GPRN

Gas Point Registration Number is a unique reference number assigned to every gas point on the natural gas network.

MPRN

Meter Point Reference Number is a unique 11-digit number assigned to every single electricity connection and meter in the country.

Public Body

For the purposes of the NEEAP target, public bodies are considered to encompass the Civil Service, commercial and non-commercial State Bodies, State-owned financial institutions, the Defence Forces, An Garda Síochána, Health Service Executive hospitals and other facilities, Local and Regional Authorities, schools and universities.

Thermal Fuels / Thermal Energy

For the purposes of this report, thermal fuels (thermal energy) comprise all solid, liquid and gas fuels used for non-transport purposes. This includes both fossil and renewable fuels used in boilers, space & process heating systems, catering, fuel-based electricity generators (on site), CHP and in all plant, equipment & other non-road-mobile vehicles.

TPER

Total Primary Energy Requirement (TPER), or primary energy, is a measure of all of the energy consumed by the organisation, which accounts for the energy that is consumed and/or lost in transformation, transmission and distribution processes.

TPER is calculated by applying published conversion factors to each element of the organisation's energy consumption. The conversion factors can vary from year to year and the factor for electricity is typically at least twice the value of those for thermal and transport fuel types.

Conversion factors for each year are available on the SEAI website.

Transport Fuel

For the purposes of this report, transport fuels comprise all liquid fuels used for transport vehicles (road, rail, air, water). This includes both fossil and renewable fuels. The electricity used for transport (rail, electric vehicles) is included within the electricity totals in this report, although an electricity-for-transport subtotal is broken out in Figure 8.



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