

Annual Report 2020 on Public Sector Energy Efficiency Performance

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





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1. Executive Summary

This is the seventh annual report on the energy efficiency performance of Government Departments and public bodies in Ireland, as defined in SI 426 of 2014¹. It is set in the context of Ireland's EU and national commitments and wider energy and climate change goals, as set out in the *Public Sector Energy Efficiency Strategy* (2017), the *Climate Action Plan* (2019), the *National Energy & Climate Plan* (2020) and the *Programme for Government* (2020) (see Chapter 2, Policy & Legislative Requirements).

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. The public sector plays a key role in contributing to those goals and objectives and as such, in 2009 the Government set an ambitious energy efficiency target of 33% by 2020 for the sector. The *Climate Action Plan* (2019) and the *Programme for Government* (2020) outlines even greater ambition for the public sector by setting a more ambitious 50% energy efficiency target, introducing a new 50% emissions reduction target by 2030 and for the sector to lead on decarbonisation across Ireland and in tackling climate change.

The *Programme for Government* (2020) sets out a commitment to an average 7% per annum reduction in overall greenhouse gas emissions from 2021 to 2030 (a 51% reduction over the decade) and to achieving net zero emissions by 2050. It also commits to a clear pathway for all sectors to become less reliant on fossil-fuels. Energy efficiency is a key enabler to that transition to a clean, low carbon energy system by 2050. The strategic importance of public sector energy efficiency is underlined not only in the *Programme for Government* but also Ireland's fourth *National Energy Efficiency Action Plan* (April 2017), the *National Mitigation Plan* (July 2017), the new *National Energy & Climate Plan* (2020) and Ireland's *Long Term Renovation Strategy* (2020).

The *Public Sector Energy Efficiency Strategy* provides the framework to assist the public sector in achieving its energy efficiency target of 33% by 2020, (increasing to 50% by 2030), reducing their energy consumption and energy costs, and embedding robust energy management practices at all levels of their business operations.

Approximately 99.7% of all public bodies are using the online national energy monitoring and reporting (M&R) system established by SEAI and DECC to report their annual energy performance data, in addition to 70% of all schools. The monitoring and reporting system provides an important record and dataset of how the public sector is performing. When the 50% emissions reduction target by 2030 is implemented, data will be collected and monitored through this same system as the energy efficiency target.

The data for 2019 shows that overall public sector energy efficiency gains have reached 29%, which reflects three sustained years of significant improvement since the introduction of the *Public Sector Energy Efficiency Strategy*. The detailed data in this report for 2019 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 2019, 349 public bodies were requested to report data to SEAI, of which 348 submitted complete reports by the reporting deadline (an increase of 1% in the compliance rate since last year).
- In addition, 3,669 standalone schools were requested to report data, of which 2,569² submitted complete reports (a decrease of 3% in the compliance rate since last year).

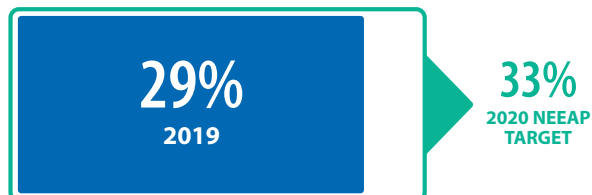
This report comprises an analysis of the data submitted by these organisations on annual energy consumption, energy and associated carbon savings achieved and energy efficiency performance in 2019 against 2020 targets. Efficiency gains are being achieved through implementation of thousands of diverse projects, ranging from structured energy management, building and facility upgrades, retrofits, changes in transportation, better energy procurement and through behavioural change in organisations.

¹ Regulation 4 of SI 426 2014 sets out the definition of a "public body".

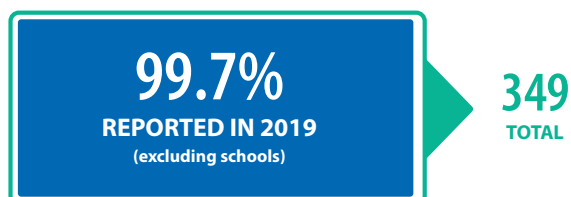
² An additional 213 schools attempted to submit reports but their data was incomplete and is not included in this report.

Current Position

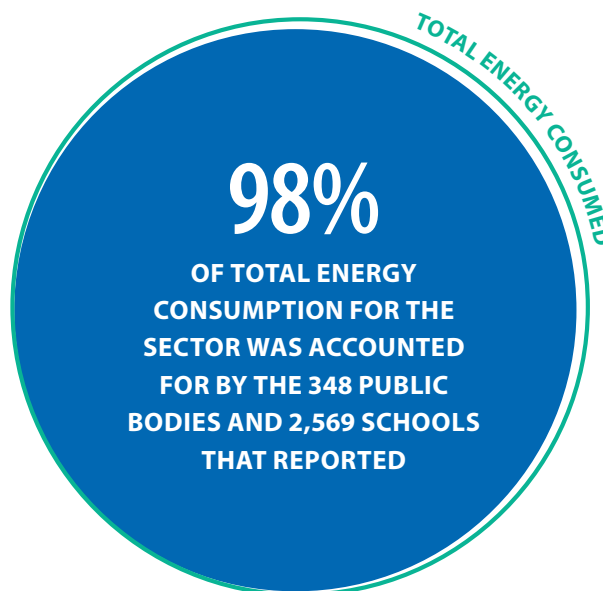
ENERGY EFFICIENCY IMPROVEMENT



PUBLIC BODY REPORTING RATE



SCHOOL REPORTING RATE



Key findings from the analysis of the data reported by 348 public bodies and 2,569 schools for 2019:

- Their combined total primary energy consumption was 9,898 GWh and their total energy spend was €699 million.
- This is estimated to represent 98% of the energy consumption of the sector.
- Annual primary energy savings of 4,064 GWh were achieved, which is equivalent to 788,000 tonnes of CO₂ savings.
- These savings amount to a 29% improvement on business as usual, representing €287 million in cost savings for the sector in 2019.
- The cumulative avoided CO₂ emissions since baseline amount to 5,218,000 tonnes, while the cumulative value of energy savings over the same period is €1,554 million.

Reporting compliance by public sector organisations is very strong. The compliance rate in 2019 for public bodies was 99.7% (excluding standalone schools).

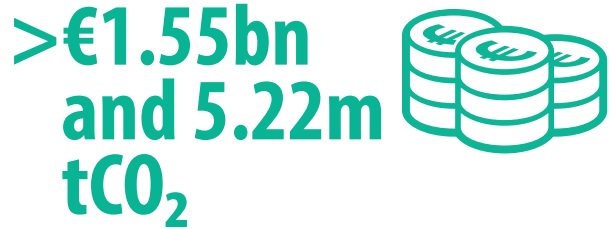
Standalone schools are recognised as a separate category. Although 3,669 schools were requested to report they account for just a small proportion (some 5%) of overall public sector energy consumption. Their circumstances and energy use profiles are significantly different to other public bodies (more limited capacity to invest, with building usage profiles that mean building fabric investments of any scale have very long payback periods). The compliance rates for public bodies and for schools are therefore reported separately.

The reporting compliance rate for schools for 2019 was 70%, which is a decrease on the 73% compliance rate the previous year.

Overall, based on the data reported, the energy efficiency performance achieved for 2019 is a good result, at 29% improvement, particularly as it represents **a continued and sustained linear trajectory of improvement since the introduction of the Public Sector Energy Efficiency Strategy.**

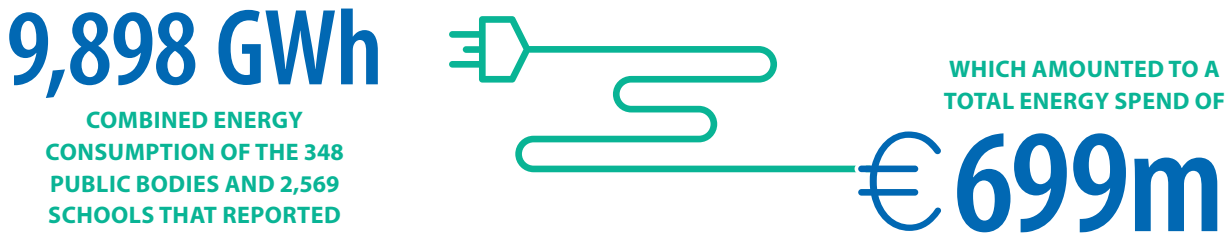
Continued proactive engagement by all public bodies and their *Energy Performance Officers*, utilising the structures and supports provided under the *Public Sector Energy Efficiency Strategy* are essential to ensure that the 33% target is met by end 2020 and to strongly position the organisations and their departmental groups for the achievement of the new and more ambitious public sector targets for 2030. The annual M&R process continues to be 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 achievement of the national targets.

It is expected that the COVID 19 crisis will impact public sector energy performance for the reporting year 2020 and the achievement of the 2020 target. The extent of this impact will not be clear until 2021.

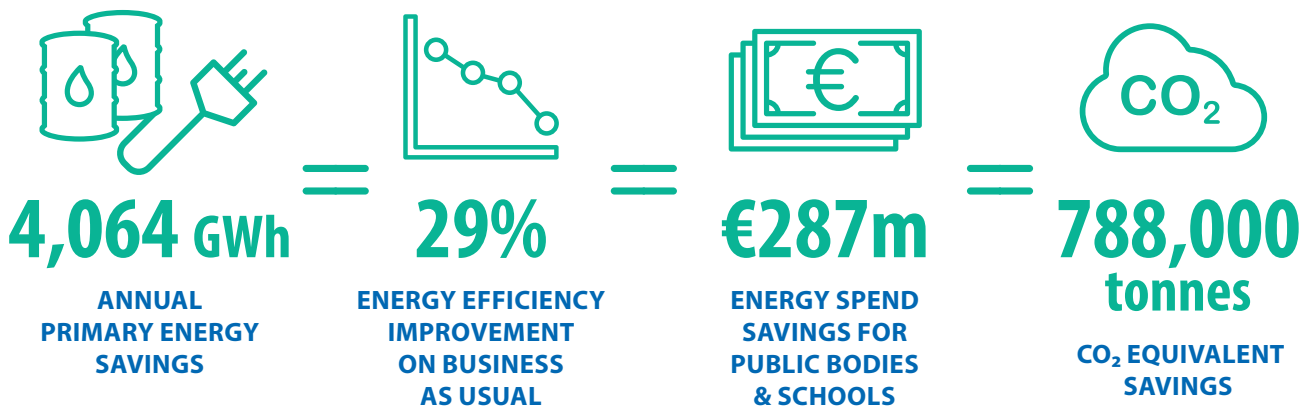


CUMULATIVE SAVINGS SINCE BASELINE

Key Findings for 2019



FOR 2019, THE SAVINGS ACHIEVED WERE:



2. Background and Context

2.1 Policy and Legislative Requirements

The *Energy Efficiency Directive (EED) (2012/27/EU)*³ 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 EED set out the exemplar role that the public sector has in contributing to the EU energy targets.

Revisions to the EED, as set out in *Directive (EU) 2019/2002*, have indicated a more ambitious new EU-wide energy efficiency target of at least 32.5% by 2030.

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 levels.

Ireland's planned climate and energy goals, policies and measures (identified up to end 2019) to contribute towards these climate and energy targets including how the public sector will contribute, are reflected in Ireland's new 10-year *National Energy & Climate Plan (NECP)*.

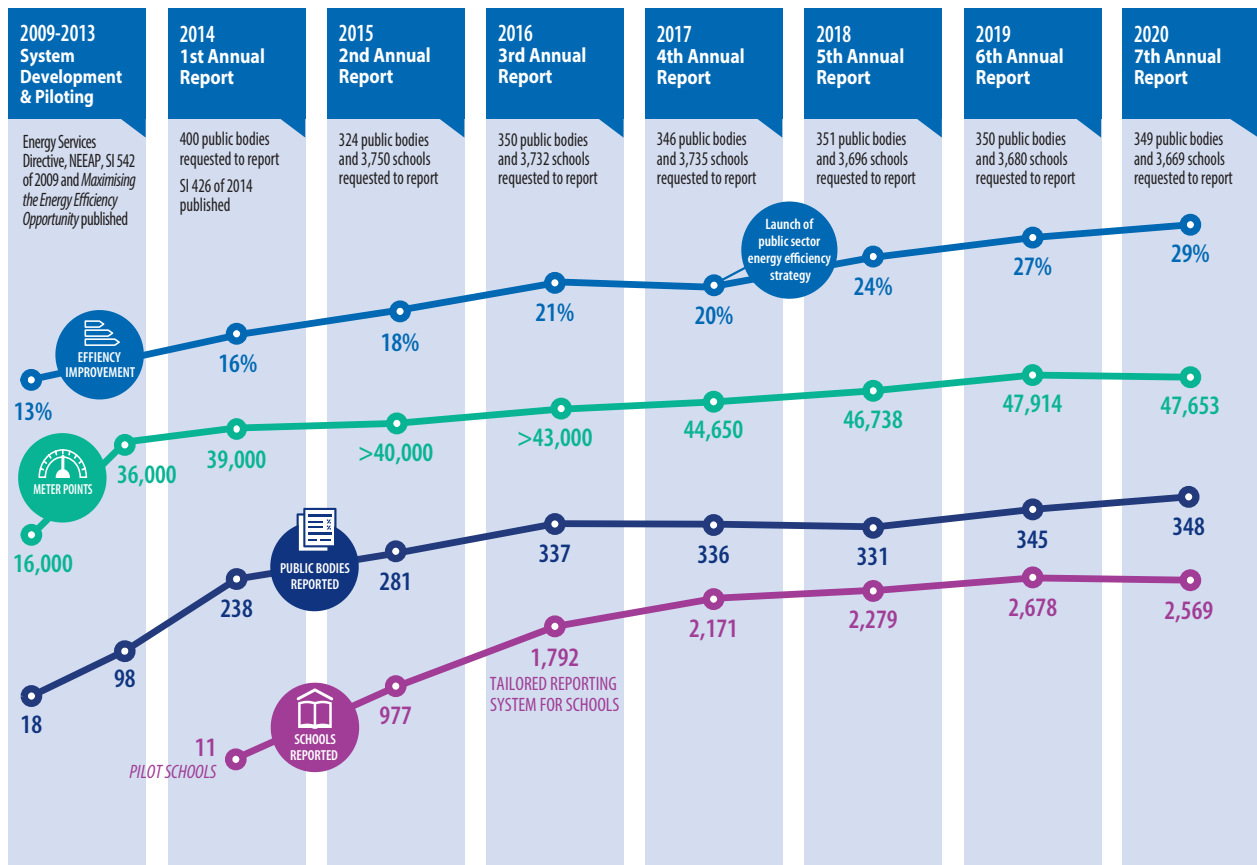
The public sector was first set its energy efficiency target in 2009. At the time, the then Government set the national

energy efficiency target of 20% by 2020 and decided that the public sector should provide leadership on energy efficiency and decarbonisation for the whole of our economy and society. It was in that context that an even more challenging target of 33% was set for the sector. Both the *Climate Action Plan (2019)* and the *Programme for Government (2020)* have outlined greater ambition for public sector energy efficiency and for the sector to lead on decarbonisation of Ireland's economy in line with Ireland's target of achieving net zero emissions by 2050.

Given this greater ambition, the sector's 2030 energy and carbon targets now include:

- 50% energy efficiency improvement
- A new 50% absolute emissions reduction target
- Public sector bodies to commit to and uphold a Climate Action Mandate on behaviours and actions to support climate reform
- A new Public Sector Decarbonisation Strategy for 2030
- All public buildings to achieve a B BER rating

FIG. 1: PROGRESS BY PUBLIC BODIES AND SCHOOLS



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

The Public Sector Energy Efficiency Strategy (2017) put in place a new framework and governance structure and enhanced the public sector support programme to assist in delivering on the sectors energy targets. In addition, the Strategy highlights the important leadership role the public sector has on energy efficiency.

Public sector bodies who have the capacity to contribute to energy efficiency retrofit of buildings projects will be prioritised for support under the DECC Mobilisation Fund subject to available funding. This fund is administered by SEAI for pathfinder partnership projects across a number of large sectors such as education and health. From 2017 to 2019, over 190 retrofit projects were supported with total DECC funding of €27 million provided. With new public sector targets to 2030 the fund will prioritise deeper retrofits with renewable heat solutions.

There has also been a significant scaling up of investment in energy efficiency – as reflected in the capital allocation for energy efficient supports from DECC through SEAI, as well as a significant scaling up of human resources within SEAI. The scale of investment will continue to rise significantly as is recognised in the National Development Plan (2019-27) and the putting in place of the Climate Action Fund which will have an allocation of at least €500 million over that period.

SEAI, on behalf of DECC, established the M&R system to enable public bodies and schools to track their energy efficiency performance towards their 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 (previous page).

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.

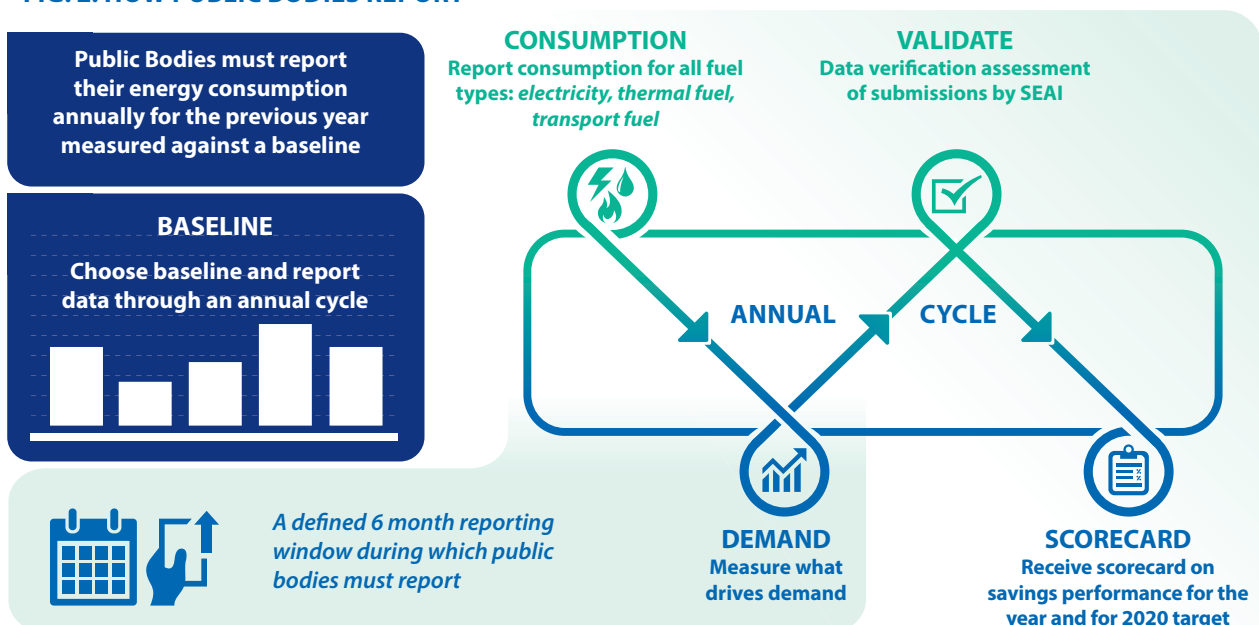
There are two key concepts applied:

- 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 measured and 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.⁴

SEAI has begun work to re-develop the M&R process, as well as the online system, in order to meet the requirement to track 2030 public sector targets as set out in the Climate Action Plan and the Programme for Government.

FIG. 2: HOW PUBLIC BODIES REPORT



4 The transfer of water services assets from local authorities to Irish Water in January 2014 is fully reflected in the energy performance of those organisations.

2.3 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.

349⁵ public bodies and 3,669 standalone schools were requested to report data to SEAI through the 2019 reporting cycle.⁶

The public bodies and schools that were requested to report during the 2019 reporting cycle are broken down as follows:

- 349 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 265 schools, were requested to report via their ETBs.
- Another 3,669 schools were requested to report directly as standalone entities.

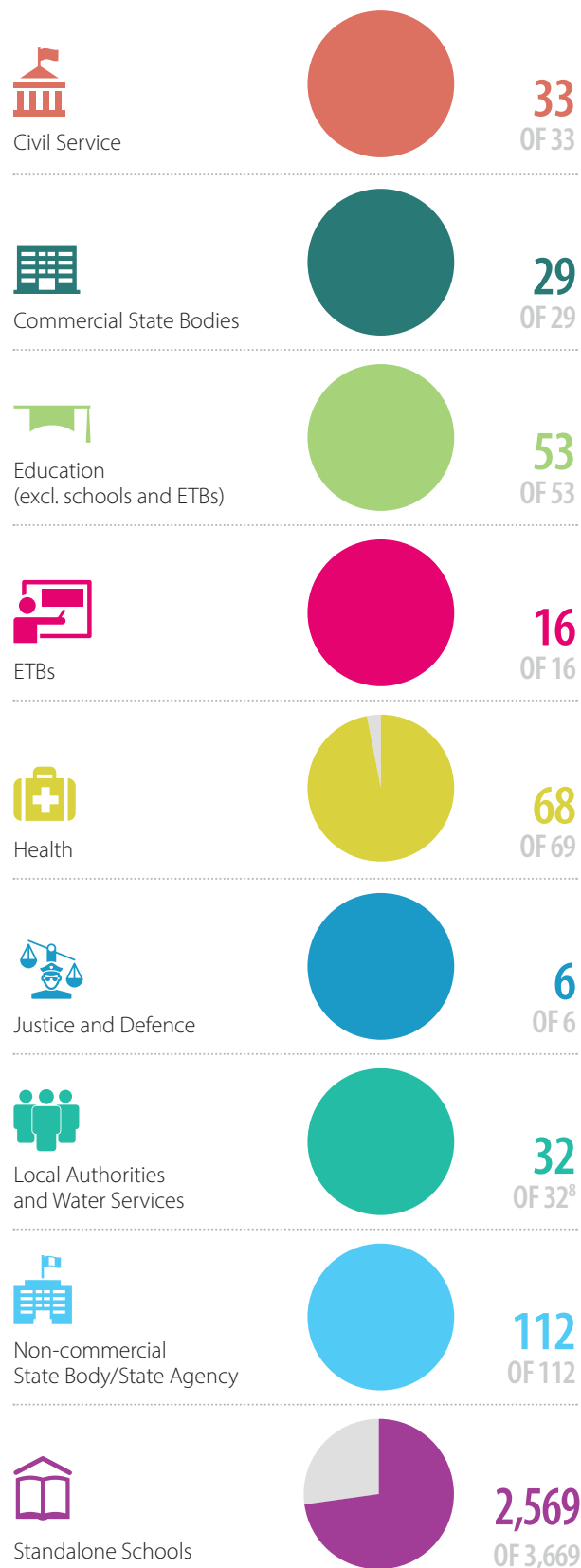
By the reporting deadline, 348⁷ public bodies and 2,569 standalone schools had made submissions to SEAI. Some of these submissions were not fully complete and are not taken into account in the analysis of the data presented in this report. The data presented in this report is an analysis of 348 complete submissions from public bodies and 2,569 from standalone schools.

The 348 complete submissions made by public bodies represents a compliance rate of 99.7%. SEAI estimates that the consumption of all of the organisations that reported represents over 98% 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 98% of total public sector energy consumption

FIG. 3: BREAKDOWN OF SUBMISSIONS BY SUB-SECTOR



5. 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.
 6. In addition, a further two public bodies were requested to report but were subsequently excused from reporting.
 7. This figure includes 3rd level institutions and ETBs, but excludes standalone schools.
 8. Includes Drogheda Port Company as part of Louth County Council.

3. Analysis of Primary Energy Consumption and Energy Spend

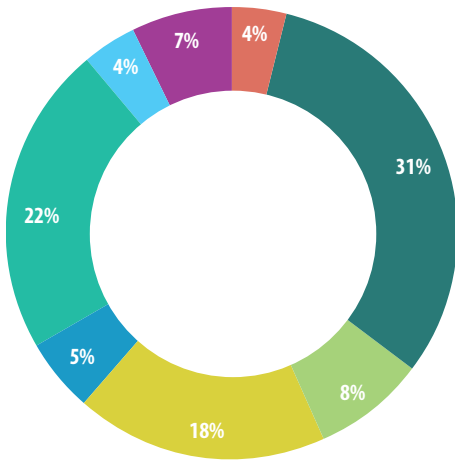
The data presented in section 3 is based on the complete reports submitted by 348 public bodies and 2,569 schools.⁹

3.1 Total Energy Consumption

The total primary energy consumption reported for 2019 was 9,898 GWh.

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

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



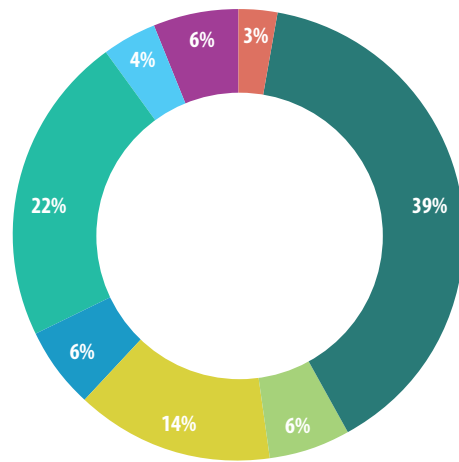
Sub-sector	2019 Energy Consumption (Primary) GWh
Civil Service	375
Commercial State Body	3,108
Education (excl. Schools & ETBs)	810
Health	1,754
Justice & Defence	543
Local Authorities & Water Services	2,208
Non-commercial State Body / State Agency	412
Schools & ETBs	688
Total	9,898

3.2 Total Energy Spend

In 2019 the total public sector energy spend was €699 million.

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

FIG. 5: SECTORAL BREAKDOWN OF TOTAL ENERGY SPEND



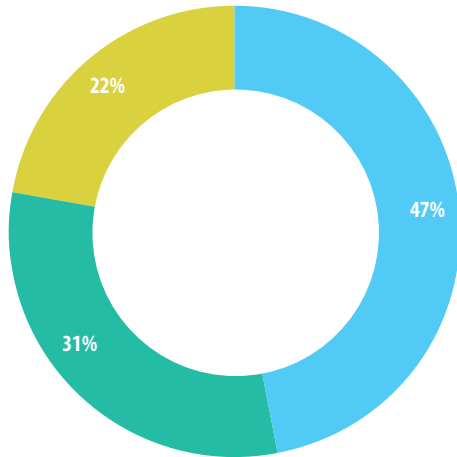
Sub-sector	2019 Energy Spend €M
Civil Service	23
Commercial State Body	272
Education (excl. Schools & ETBs)	45
Health	101
Justice & Defence	39
Local Authorities & Water Services	151
Non-commercial State Body / State Agency	28
Schools & ETBs	41
Total	699

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

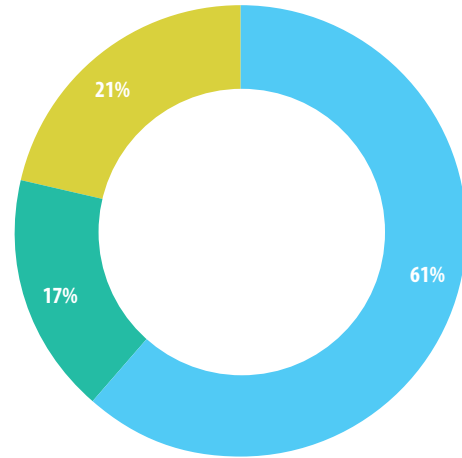
The breakdown of the 9,898 GWh of energy consumption reported for 2019 between electrical, heating (thermal) and transport is illustrated in Figure 6. The thermal and transport subtotals are broken down by fuel type in Figures 6A and 6B.

FIG. 6: CONSUMPTION SPLIT



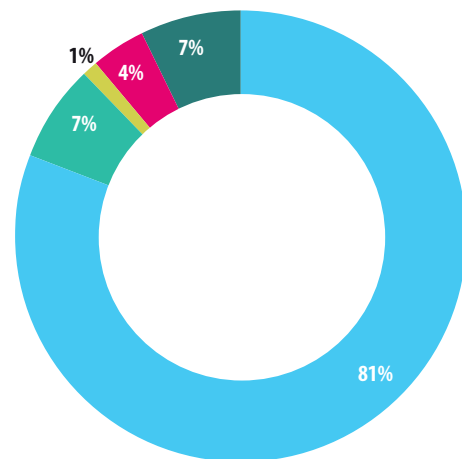
Fuel type	2019 Energy Consumption (Primary)
	GWh
Electricity	4,658
Thermal	3,097
Transport	2,143
Total	9,898

FIG. 6A: THERMAL ENERGY BREAKDOWN



Fuel	2019 Consumption (Primary)
	GWh
Natural Gas, LPG & Biogas	1,904
Heating Oils	537
Wood Fuels	656
Total	3,097

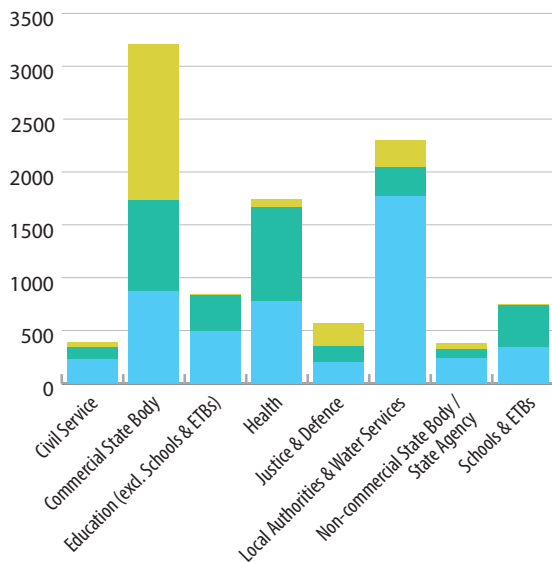
FIG. 6B: TRANSPORT ENERGY BREAKDOWN



Fuel	2019 Consumption (Primary)
	GWh
Road Diesel	1,744
Marked Diesel (Non-thermal)	151
Petrol	11
Biofuels	93
Other Transport Fuels	143
Total	2,143

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

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

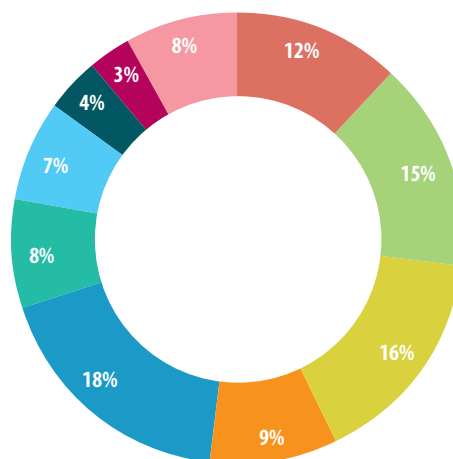


Sub-sector	2019 Energy Consumption (Primary)		
	Electricity GWh	Thermal GWh	Transport GWh
Civil Service	214	119	42
Commercial State Body	811	831	1,465
Education (excl. Schools & ETBs)	461	341	7
Health	760	909	85
Justice & Defence	190	159	195
Local Authorities & Water Services	1,674	287	247
Non-commercial State Body / State Agency	230	84	99
Schools & ETBs	318	368	2
Total	4,658	3,097	2,143

3.4 Electricity Consumption

The total electricity consumption is 4,658 GWh and is broken down in Figure 8. Buildings account for 2,462 GWh or 53% of electricity consumed.

FIG. 8: BREAKDOWN OF ELECTRICITY CONSUMPTION

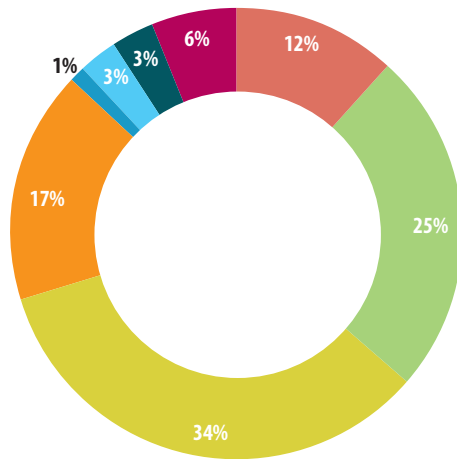


Breakdown by Use	2019 Electricity Consumption (Primary) GWh
Office Buildings	558
Education Buildings	717
Healthcare Buildings	755
Other Buildings	432
Water Services	831
Public Lighting	372
Waste & Other Processing	322
Transport	176
Other	144
Unknown	352
Total	4,658

3.5 Natural Gas Consumption

The total natural gas consumption is 1,787 GWh and is broken down in Figure 9. Buildings account for 1,576 GWh or 88% of natural gas consumed.

FIG. 9: BREAKDOWN OF GAS CONSUMPTION



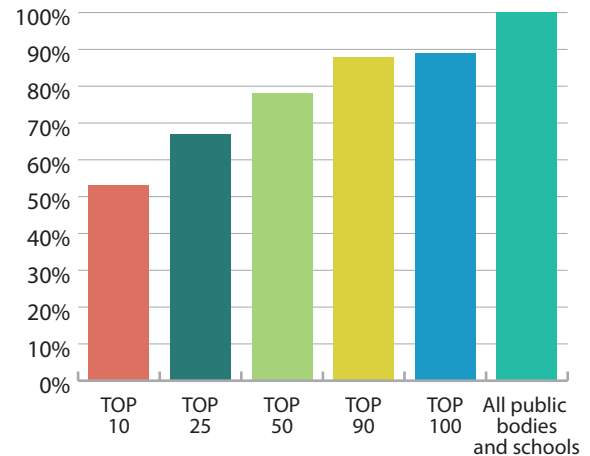
Breakdown by Use	2019 Natural Gas Consumption GWh
Office Buildings	208
Education Buildings	455
Healthcare Buildings	610
Other Buildings	303
Water Services	14
Waste & Other Processing	47
Electricity Generation	3
Other	46
Unknown	101
Total	1,787

10 public bodies account for 52% of total consumption

3.6 Main Energy Consumers

Altogether, the total primary energy consumption in 2019 of the ten largest energy consumers was 5,186 GWh, which accounts for 52% of total reported consumption. The 100 largest energy consumers that reported account for 88% of the total reported primary energy consumption.

FIG. 10: BREAKDOWN OF MAIN ENERGY CONSUMERS



Main Energy Consumers	2019 Energy Consumption (Primary) GWh
Top 10	5,186
Top 25	6,538
Top 50	7,647
Top 90	8,570
Top 100	8,702
All public bodies and schools	9,898

It is likely that improvements by the top 50 energy consumers (which account for 77% of energy consumption) will largely determine if the 33% target will be met by the sector by 2020.

4. Analysis of Energy Savings Achieved and Performance

4.1 Performance of Departmental Groups

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

Figure 11 gives an overview of the efficiency performance by the end of 2019 and energy use by departmental group, as well as the number of public bodies in each group and their reporting status. The consumption and efficiency data shown represent the **aggregate data for all of the individual public bodies within each Departmental Group, including the governing Department itself.**

FIG. 11: PERFORMANCE OF DEPARTMENTAL GROUPS

Departmental Group	2019 Energy Consumption (Primary)	Compliance		Overall Status (2019)	Energy Savings Since Baseline
	% public sector	No. complete reports	No. organisations		
Agriculture, Food & the Marine	12%	11	11	●	21%
Business, Enterprise & Innovation	<1%	14	14	●	49%
Children & Youth Affairs	<1%	5	5	●	22%
Culture, Heritage & the Gaeltacht	<1%	17	17	●	37%
Defence	2%	3	3	●	21%
Education & Skills	10%	78	78	●	35%
– Standalone Schools	5%	2,569	3,669	●	5%
Employment Affairs & Social Protection	<1%	3	3	●	35%
Environment, Climate & Communications	4%	16	16	●	38%
Finance	2%	8	8	●	36%
Foreign Affairs & Trade	<1%	1	1	●	43%
Health (excl. HSE)	<1%	18	18	●	36%
– HSE	18%	58	59	●	26%
Housing, Planning & Local Government	11%	18	18	●	32% ¹
– Local Authorities	11%	32	32	●	28% ²
Justice & Equality	4%	18	18	●	25%
Public Expenditure & Reform	<1%	10	10	●	40%
Rural & Community Development	<1%	5	5	●	59%
Taoiseach	<1%	9	9	●	35%
Transport, Tourism & Sport	18%	25	25	●	29%

The overall status of energy efficiency improvement on baseline for 2019 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
This group includes Irish Water. 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 6.5%.

Note 2
Includes Drogheda Port Company as part of Louth County Council.

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

The combined savings in 2019 of the public bodies and schools that submitted complete reports is 4,064 GWh¹⁰ of primary energy, as illustrated in Figure 12. This amount is equivalent to a 29% 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 2019 data, a 33% improvement would be equivalent to 4,606 GWh of primary energy savings.

The 4,064 GWh of annual energy savings are equivalent to 788,000 tonnes of annual CO₂ savings.

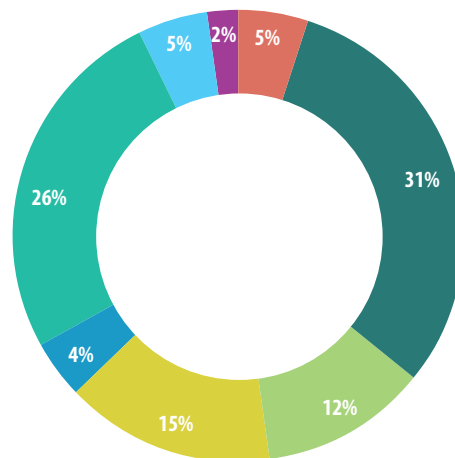
The cumulative avoided CO₂ emissions (up to 2019) since their baselines reported by the public bodies and schools that submitted complete reports amount to 5,218,000 tonnes.



**Cumulative
5.2 million
tonnes**

**2019
788,000
tonnes**

FIG. 12: SOURCES OF ENERGY SAVINGS



Sub-sector	2019 Energy Savings (Primary) GWh
Civil Service	194
Commercial State Body	1,253
Education (excl. Schools & ETBs)	478
Health	623
Justice & Defence	161
Local Authorities & Water Services	1,071
Non-commercial State Body / State Agency	186
Schools & ETBs	99
Total	4,064

¹⁰ Calculated by subtracting each organisation's actual 2019 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 2019 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.

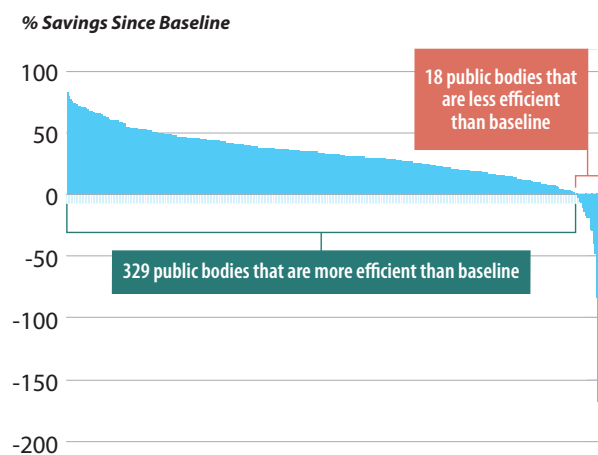
The analysis of the performance of the 348 public bodies (excluding standalone schools) that reported shows that:

- **56%** are more efficient than their baselines and are on track for their 2020 target (Aggregate 2019 savings of 2,638 GWh, which is equivalent to 508,000 tonnes of CO₂).
- **39%** are more efficient than their baselines but are not yet on the path to the 2020 target (Aggregate 2019 savings of 1,395 GWh, which is equivalent to 275,000 tonnes of CO₂).
- **5%** are less efficient than their baselines (Aggregate 2019 deterioration in performance of 8 GWh, which is equivalent to 2,000 tonnes of CO₂).

Of the public bodies that reported, **95% have made improvements on their baselines**. Taking both the savings and deteriorations into account, overall improvement for the public bodies is 4,025 GWh. This is equivalent to 781,000 tonnes of CO₂.

The distribution of the performance results is shown in Figure 13.

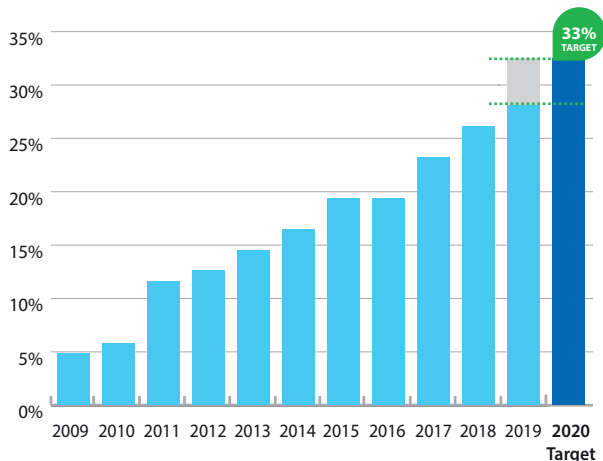
FIG. 13: OVERALL LEVEL OF IMPROVEMENT ON BASELINE



2019 Performance (all sectors)	No. Public Bodies	No. Stand-alone Schools	Total No.
>40% improvement	112	211	323
30-40% improvement	78	201	279
20-30% improvement	64	277	341
10-20% improvement	48	353	401
0-10% improvement	28 ¹²	356	384
Deterioration in performance	18	1,171	1,189
Total	348	2,569	2,917

The graph in Figure 14 tracks how the total savings achieved in each year since 2009 compare to the 2020 target.

FIG. 14: ANNUAL PRIMARY ENERGY SAVINGS



Year	Saving GWh
2009	497
2010	697
2011	1,338
2012	1,511
2013	1,914
2014	2,199
2015	2,605
2016	2,637
2017	3,216
2018	3,677
2019	4,064

In addition to the energy efficiency improvements achieved, the absolute level of energy consumption has reduced over time. The 348 public bodies and 2,569 schools that reported data consumed **1,316 GWh** less primary energy in 2019 than they did in their baselines, a reduction of 12%.

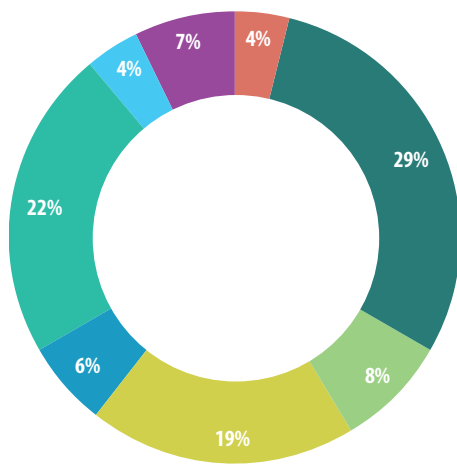
¹² One organisation is being tracked from a 2019 baseline. Its savings for 2019 are zero. Its progress towards its target can only be calculated after it reports next year for 2020. It is included in the 28 public bodies shown in the table as having made 0-10% improvement, but is not included in the 330 public bodies labelled in the chart as being 'more efficient than baseline'.

4.3 Analysis of Public Sector CO₂ Emissions (tonnes)

The 2019 energy consumption of the 348 public bodies and 2,569 standalone schools that reported is equivalent to 1,787,000 tonnes of CO₂ emissions, which is a reduction of 27% since their baselines. The sectoral breakdown of these emissions is shown in Figure 15.

The 4,064 GWh of annual energy savings achieved are equivalent to 788,000 tonnes of annual CO₂ savings. These are CO₂ emissions that have been avoided because the sector has improved its energy efficiency by 29%.¹³

FIG. 15: BREAKDOWN OF ENERGY-RELATED CO₂ EMISSIONS



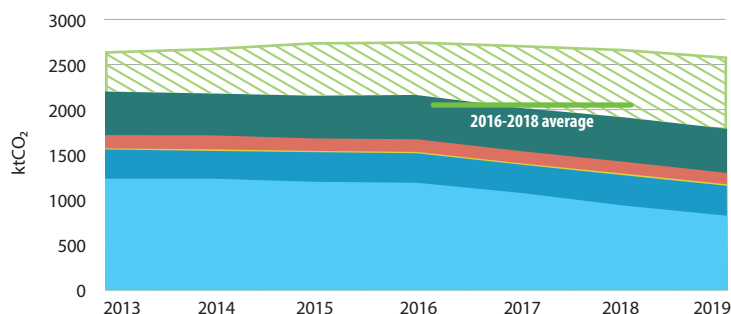
Sub-sector	2019 energy related CO ₂ ktCO ₂
● Civil Service	70
● Commercial State Body	512
● Education (excl. Schools & ETBs)	148
● Health	336
● Justice & Defence	110
● Local Authorities & Water Services	397
● Non-commercial State Body / State Agency	80
● Schools & ETBs	133
Total	1,787

¹³ The avoided emissions for each organisation are calculated by working out what the organisation's 2019 energy-related CO₂ emissions would have been had it not made the reported efficiency gains since its baseline.

FIG. 16: TOTAL ENERGY-RELATED CO₂ EMISSIONS OVER TIME (DIRECT AND INDIRECT)¹⁴

Figure 16 shows the actual energy-related CO₂ emissions from the sector since 2013, split by energy type, and the avoided CO₂ emissions over the period. The average CO₂ emissions for 2016-2018 is shown by the green line.

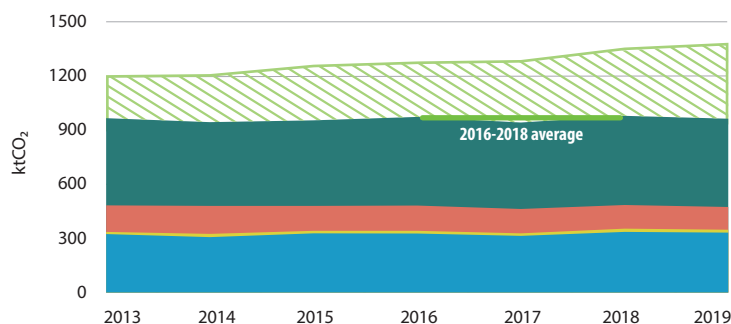
The decrease in actual emissions since 2013 is mainly due to the decarbonisation of Ireland's electricity supply, i.e. the reduction is because the electricity system has become 'cleaner' over this period. The CO₂ emissions relating to thermal and transport fuels have remained steady in absolute terms, despite a 2.2% per annum increase in activity level across the sector since 2013. The avoided emissions have increased over time, as the sector has improved its energy efficiency.



Fuel type ktCO ₂	2013	2014	2015	2016	2017	2018	2019
Electricity	1,235	1,236	1,201	1,190	1,078	937	824
Natural gas	324	307	328	327	314	336	332
LPG	12	18	14	15	14	18	16
Heating oils & solid fossil fuels	147	155	138	140	135	131	126
Transport fuels	483	464	474	491	479	494	489
Total	2,201	2,179	2,154	2,162	2,020	1,915	1,787
Avoided emissions	425	490	579	580	683	743	788

FIG. 17: ENERGY-RELATED CO₂ EMISSIONS OVER TIME, EXCLUDING ELECTRICITY-RELATED EMISSIONS

Electricity accounts for 46% of the 2019 emissions, with thermal and transport accounting for 27% each. The impact of the electricity system emissions reductions is excluded from Figure 17, which only shows the non-electricity energy-related CO₂ emissions from the public sector, i.e. emissions from the use of thermal and transport fuels reported by public bodies and schools. The combined actual emissions from thermal and transport fuel consumption in the sector have shown little change since 2013.



Fuel type ktCO ₂	2013	2014	2015	2016	2017	2018	2019
Natural gas	324	307	328	327	314	336	332
LPG	12	18	14	15	14	18	16
Heating oils	147	155	138	140	135	131	126
Transport fuels	483	464	474	491	479	494	489
Total	966	944	954	972	941	978	963
Avoided emissions	220	259	301	300	339	371	413

¹⁴ It includes energy-related emissions produced as a result of fuel combustion on site, such as gas/oil boilers and fleet vehicles.

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

The value of the **energy savings** reported for 2019 is **€287 million**. As the total spend in 2019 for all of the organisations that reported data is €699 million, this represents a saving of 29% in energy costs attributable to energy efficiency improvements.

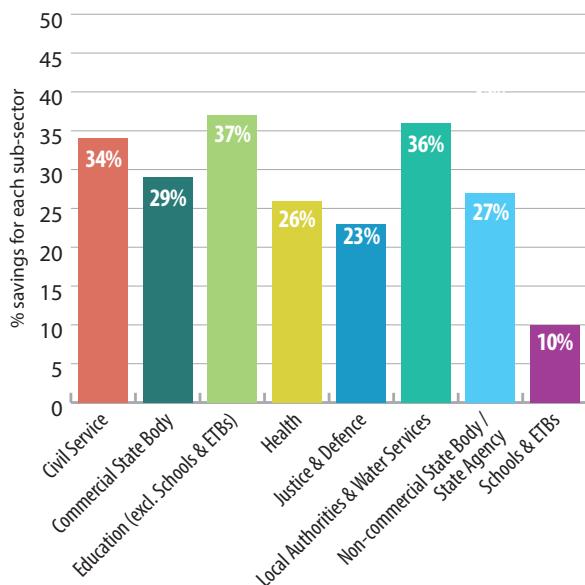
The value of the cumulative energy savings (up to 2019) since their baselines reported by the public bodies and schools that submitted complete reports is **€1,554 million**.

4.5 Sub-sector Primary Energy Savings (GWh)

The breakdown of savings in primary energy (GWh) and percentage improvement on ‘business as usual’ by sub-sector is set out in the table in Figure 18. The equivalent CO₂ savings are also identified.

The bar chart in Figure 18 illustrates percentage savings for each sub-sector.

FIG. 18: SUB-SECTOR COMPARISON OF PERFORMANCE TO DATE (PRIMARY ENERGY SAVINGS)



Sub-sector	2019 Energy Savings (Primary)		CO ₂ Savings
	GWh	% Improvement on BAU	Tonnes (000s)
Civil Service	194	34%	36
Commercial State Body	1,253	29%	261
Education (excl. Schools and ETBs)	478	37%	88
Health	623	26%	120
Justice & Defence	161	23%	33
Local Authorities & Water Services	1,071	36%	197
Non-commercial State Body / State Agency	186	27%	35
Schools & ETBs	99	10%	19
Total	4,064	29%	788

BAU: business as usual

Avoided Energy Spend



2019
€287 million

Cumulative
€1,554 million

Making Progress

The data submitted demonstrates savings achieved through the implementation of thousands of efficiency measures. From 2017 to 2019, over 190 retrofit projects were supported by the DECC 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 23%. The projects illustrated on these pages are a selection of the **4,376 projects** that were reported to SEAI in 2019. While the overall level of project reporting is improving, many of the efficiency measures are still relatively small scale.

During 2019, DECC, 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.



66% Energy Saving

Extensive fabric upgrade works were undertaken at **Lawrencetown National School**, including the upgrade of windows, internal wall insulation and new insulated flat roofs. A high efficiency heat pump and upgraded heating distribution system meet heating and hot water needs. A new mechanical ventilation with heat recovery system automatically removes contaminants from the air. New LED lighting and a small PV system were also fitted. The school now benefits from a more comfortable teaching environment and is expected to have up to 66% energy savings and a 75% reduction in CO₂ emissions, according to design figures.



€110,000

In 2019, **Fingal County Council** (FCC) replaced 6,000 streetlamps with LEDs as part of an accelerated LED energy efficiency programme. This has resulted in 2 GWh reduction in primary energy consumption, equivalent to 660,000 kg of CO₂ emissions and energy bill savings of €110,000. FCC also took part in SEAI's ISO 50001 Accelerator Programme and was accredited following successful certification audits in 2019. The implementation of this energy management standard has led to significant energy savings with a 7.1% increase in energy performance in 2019 compared to 2018.



€1,329,000

The **HSE Energy Bureau** in collaboration with SEAI organised a comprehensive Engaging People Accelerator Programme. The training programme was offered to energy teams across the top 50 energy users in the East region. The programme was a huge success and participants reported increased levels of buy-in when energy savings were linked to health benefits and patient care. In 2019, the HSE identified savings of almost 7% in participating locations through energy management, awareness and behavioural change alone, before any capital investment. This is the equivalent saving of 12 GWh, €1,329,000 or 3,170,000 kg of avoided CO₂ emissions.



61%

An Post's ambition is to be the greenest postal service in Europe. This is supported by its ISO 50001 certified energy performance management system and its goal to achieve zero-emission postal deliveries around the country. By the end of 2019, it had replaced 110 vehicles in Dublin City Centre with electric vehicles and acquired Ireland's first 7.5 tonne electric truck. A sample batch of vans show energy savings of 56 kWh per 100 km or 61% and fuel cost savings of €5.61 per kWh or 47%. All An Post drivers are receiving Eco-Driving training to ensure best-practice driving in all vehicles and for all road and weather conditions.





219,000 kWh

In 2019, **NUIG** upgraded 300 fluorescent fittings to LEDs and installed 28 heat pumps in various buildings, achieving combined savings of 219,000 kWh per year. It also replaced electric heaters with an air-to-water heat pump and carried out a deep retrofit at one of the residential houses, upgrading its BER from an F to an A2 rating. NUIG is ISO 50001 certified and has a core focus of engaging students and staff in behavioural change. The Green Campus team led a very successful Christmas campaign targeting energy reduction over the festive period. The University believes it is achieving up to 2% energy savings per year on behavioural change alone.



120,000 kWh

In 2019, **Port of Waterford** upgraded its container crane and tower lights to LED resulting in 120,000 kWh or 10% energy savings per annum. The large foyer doors were replaced to prevent thermal leakage and a solar PV array was installed at Marine Point building, generating 8,000 kWh electricity per annum for its own offices. In addition, Port of Waterford purchased 3 electric vehicles for shipping pilot operations staff. Results from this switch to a more environmentally friendly mode of transport show 49% energy savings compared to conventional diesel cars.



37,300 kWh

In 2019, **St Christopher's Services** was assigned a technical consultant through SEAI's Section 38/39 Energy Bureau Support Services. They availed of 50% funding under SEAI's community grants to upgrade their heating and lighting systems. In total, 141 LED lights were installed as well as two (10 kW & 14 kW) air-air heat pump systems. A heat recovery ventilation system was also installed to reduce infiltration and provide consistency of ventilation. The energy efficiency upgrades carried out will result in energy savings of 37,300 kWh or €5,200 per year.



60,000 kg of CO₂

TG4's philosophy is to do more with less – this ideology has been actioned through its efficient use of energy and 'green' project planning. In 2019, TG4 implemented a significant lighting upgrade project. A total of 571 standard CFL and halogen spotlight fittings were replaced with LEDs.

The total annual energy savings resulting from this upgrade was 148,000 kWh representing a 68% reduction. Through implementation of these measures, the company has avoided over 60,000 kg of CO₂ emissions per annum.



280,000 kg of CO₂

The **Irish Aviation Authority (IAA)** undertook a total of 12 energy saving upgrade works across IAA sites nationwide. The measures included heat pump installations, air handling unit upgrades, LED lighting, building insulation, window and door replacements and ventilation installations. The projects were supported by funding from SEAI's community grants and have resulted in energy savings of 980,800 kWh per annum with over 280,000 kg avoided CO₂ emissions.

5. Towards 2020 and 2030

5.1 Departmental Group Performance

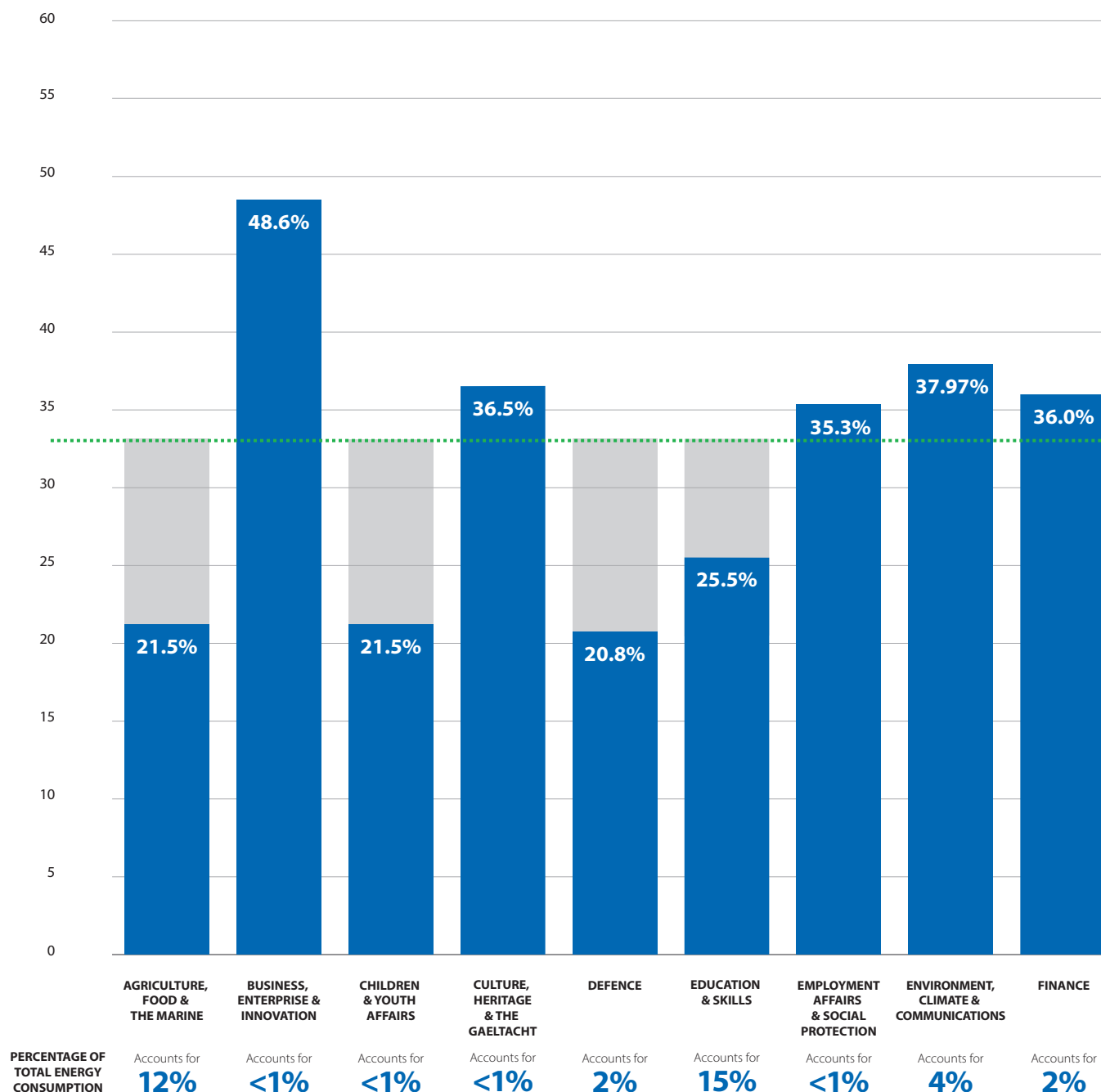
The analysis of the data reported by 348 public bodies and 2,569 schools shows that the annual energy efficiency savings at 2019 represents an overall efficiency gain of 29%.

Although a 29% efficiency improvement represents a substantial saving, public bodies must bridge the gap to the

2020 target and beyond to the new 50% target for 2030.

Figure 19 illustrates the 2019 position of each departmental group with respect to the target.

FIG. 19: DEPARTMENTAL PERFORMANCE AGAINST 2020 TARGET



Note 1

This group includes Irish Water. 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 6.5%.

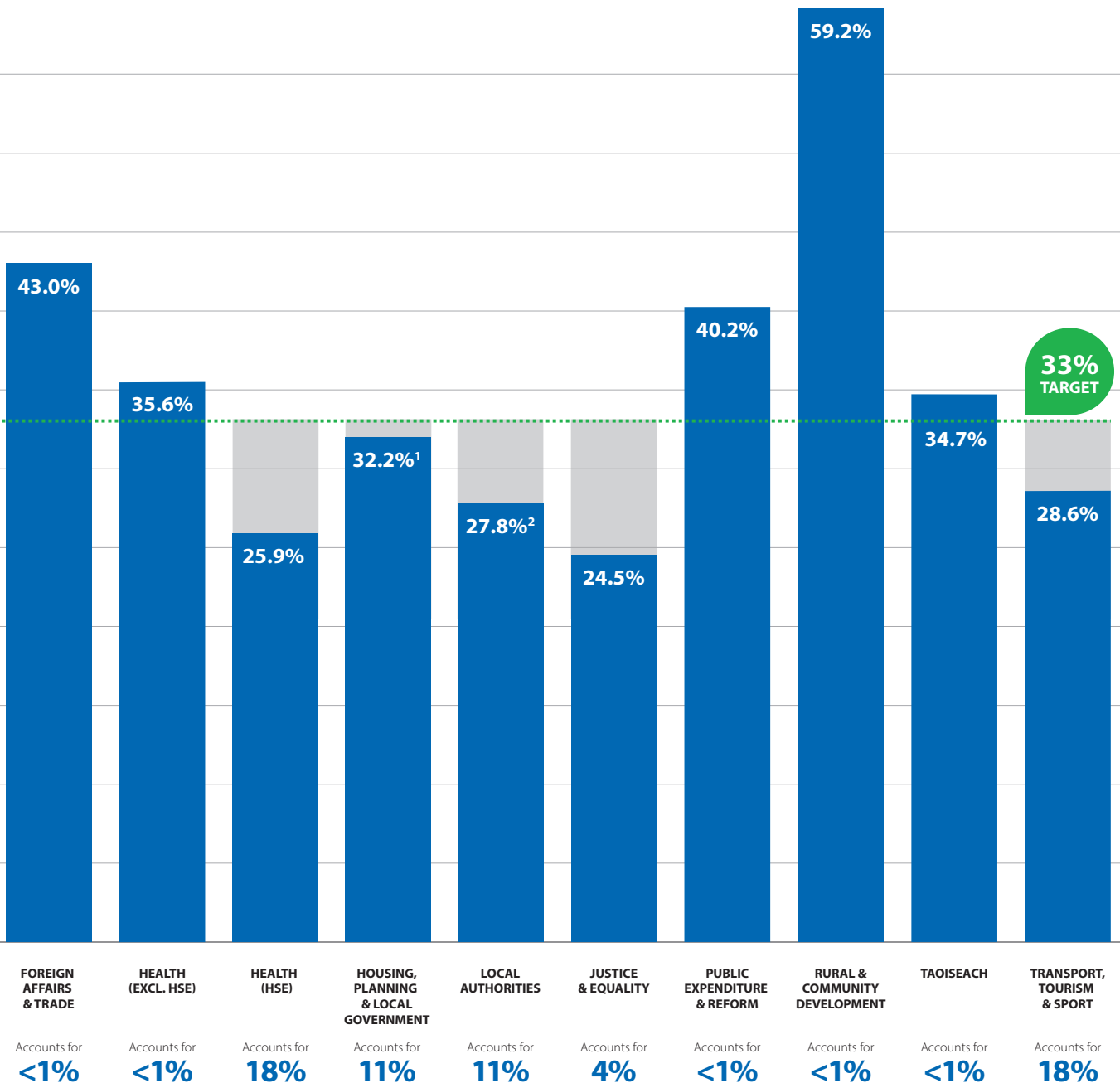
Note 2

Includes Drogheda Port Company as part of Louth County Council.

A collective effort across all departmental groups 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 5.2.

Public bodies must bridge the gap to the 2020 target.



5.2 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 Standalone Schools)

The 348¹⁵ public bodies that made a complete submission to SEAI by the deadline are alphabetically listed in section 5.2.1.

Non-reporting Public Bodies

The public bodies that did not report are listed alphabetically in section 5.2.2.

Standalone Schools

The 2,569 standalone schools that made complete submissions to SEAI by the deadline account for 5% 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 publishes public sector energy data online, including detailed organisation-level energy consumption and performance data, and a database of energy-saving projects. This is available at www.seai.ie/publicsectorreport.

Detailed organisation-level and project data is available at www.seai.ie/publicsectorreport

15 Including ETBs but excluding standalone schools.

5.2.1 Public Bodies (Excluding Schools)

LIST OF PUBLIC BODIES THAT REPORTED

Public Body	2019 Energy Consumption (Primary) GWh	Overall Status (2019)	Energy Savings Since Baseline %
Abbey Theatre	1.9	●	34.3%
Ability West	3.3	●	19.3%
Adoption Authority of Ireland	0.2	●	37.2%
AHEAD	<0.1	●	36.0%
An Bord Pleanála	0.9	●	51.8%
An Foras Teanga - Foras na Gaeilge	0.9	●	6.6%
An Foras Teanga – Ulster Scots Agency	<0.1	●	15.9%
An Garda Síochána	187.5	●	30.4%
An Post	144.1	●	14.7%
Arts Council	0.4	●	34.2%
Athlone Education Centre	0.1	●	17.9%
Athlone Institute of Technology	11.3	●	29.3%
Bantry Bay Port Company DAC	<0.1	●	46.3%
Beaumont Hospital	58.6	●	18.5%
Blackrock Education Centre	0.2	●	59.2%
Bord Bia	0.5	●	62.4%
Bord Iascaigh Mhara	3.9	●	3.5%
Bord na Móna plc	58.5	●	52.6%
Broadcasting Authority of Ireland	0.3	●	32.6%
Brothers of Charity Services Ireland CLG	36.2	●	33.8%
Bus Éireann	353.7	●	14.6%
Camphill Communities (Ireland)	9.4	●	27.0%
Cappagh National Orthopaedic Hospital	7.3	●	42.6%
Carlow County Council	11.8	● ₃	30.9%
Carrick-on-Shannon Education Centre	0.1	● ₂	-3.3%

Public Body	2019 Energy Consumption (Primary) GWh	Overall Status (2019)	Energy Savings Since Baseline %
Carriglea Cárde Services	4.0	●	19.4%
Cavan & Monaghan Education & Training Board	10.5	● ₂	11.4%
Cavan County Council	14.5	● ₃	14.0%
Central Bank of Ireland	18.0	●	61.8%
Central Remedial Clinic	5.3	●	19.4%
Central Statistics Office	3.4	●	44.7%
Charities Regulator	<0.1	●	39.2%
Cheeverstown House	6.6	●	8.8%
Cheshire Ireland	5.9	●	24.9%
Chief State Solicitor's Office	1.6	●	41.3%
Children's Health Ireland (CHI) at Crumlin	31.9	● ₂	29.7%
Children's Sunshine Home/Laura Lynn	1.3	●	20.9%
Children's University Hospital	16.3	●	20.4%
Citizens Information Board	0.9	●	25.7%
City of Dublin Education & Training Board	26.0	●	13.9%
Clare County Council	29.3	● ₃	16.9%
Clare Education Centre	0.2	●	37.0%
Co. Wexford Education Centre	0.1	●	29.0%
Cobh Community Hospital	0.5	●	3.2%
Coillte Teoranta	1,031.5	●	20.2%
Commission for Aviation Regulation	0.1	●	62.6%

The overall status of energy efficiency improvement on baseline for 2019 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 2

SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Commission for Communications Regulation	0.6	●	27.8%
Commission for Railway Regulation	0.1	●	58.5%
Commission for the Regulation of Utilities	0.3	●	71.4%
Commissioners of Irish Lights	11.9	●	44.3%
Companies Registration Office & Registrar of Friendly Societies	0.3	● ₂	69.8%
Competition and Consumer Protection Commission	0.3	● ₂	65.5%
Coombe Women & Infants University Hospital	9.4	●	9.0%
Cope Foundation	17.0	●	15.2%
Cork Airport	17.6	●	51.8%
Cork City Council	52.7	● ₃	44.9%
Cork County Council	69.7	● ₃	22.3%
Cork Education & Training Board	22.1	●	11.9%
Cork Education Support Centre	0.2	●	28.5%
Cork Institute of Technology	24.4	●	45.6%
CORU	0.3	●	35.1%
Courts Service	37.6	●	18.8%
Crawford Art Gallery Cork	1.2	●	19.1%
daa plc	133.7	●	48.1%
Data Protection Commissioner	0.5	●	49.3%
Daughters of Charity – Child & Family Services	0.7	● ₂	17.3%
Daughters of Charity – Intellectual Disability Services	19.5	●	14.6%
Defence Forces	239.9	●	20.6%

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Dental Council	<0.1	●	12.7%
Department of Agriculture, Food & the Marine	46.1	●	35.1%
Department of Children & Youth Affairs	1.5	●	43.5%
Department of Culture, Heritage & the Gaeltacht	3.4	●	75.9%
Department of Defence	3.7	●	32.2%
Department of Education & Skills	8.6	●	28.3%
Department of Employment & Social Protection	45.4	●	35.4%
Department of Environment, Climate & Communications	7.4	●	32.4%
Department of Finance	10.4	●	3.4%
Department of Foreign Affairs & Trade	7.9	●	43.0%
Department of Health	3.8	●	-84.2%
Department of Housing, Planning & Local Government	5.5	●	17.8%
Department of Jobs, Enterprise & Innovation	3.5	●	52.9%
Department of Justice & Equality	10.6	●	33.1%
Department of Public Expenditure and Reform	5.8	●	67.5%
Department of Rural & Community Development	0.4	●	16.5%
Department of the Taoiseach	3.5	●	18.1%
Department of Transport, Tourism & Sport	31.5	●	23.4%

The overall status of energy efficiency improvement on baseline for 2019 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 2
SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Design & Crafts Council Ireland	0.4	●	-11.3%
Digital Hub Development Agency	4.5	●	10.8%
Donegal County Council	52.3	● ₃	17.8%
Donegal Education & Training Board	10.7	●	7.0%
Donegal Education Centre	<0.1	●	32.6%
Drogheda Port Company	0.6	●	68.4%
Drumcondra Education Centre	0.1	●	41.4%
Dublin & Dún Laoghaire Education & Training Board	33.8	●	29.0%
Dublin Bus	297.7	●	16.9%
Dublin City Council	172.3	● ₃	36.5%
Dublin City University	64.3	●	46.8%
Dublin Dental Hospital & School	2.0	●	37.9%
Dublin Institute for Advanced Studies	1.7	●	35.0%
Dublin Institute of Technology	34.2	●	23.8%
Dublin Port Company	15.6	●	34.1%
Dublin West Education Centre	0.1	●	38.4%
Dún Laoghaire Institute of Art, Design & Technology	5.7	●	11.4%
Dún Laoghaire-Rathdown County Council	46.2	● ₃	37.2%
Dundalk Institute of Technology	13.6	●	2.9%
Economic and Social Research Institute (ESRI)	1.1	●	10.5%
Educampus Services	0.1	●	36.1%
Education Centre Tralee	<0.1	● ₁	

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
EirGrid Plc	5.8	●	47.3%
Electricity Supply Board	107.5	●	39.6%
Enable Ireland	8.7	●	35.5%
Enterprise Ireland	5.8	●	52.6%
Environmental Protection Agency	4.4	●	49.6%
Ervia (Business Services)	3.0	●	48.5%
Fáilte Ireland	3.4	●	45.2%
Financial Services and Pensions Ombudsman	0.2	●	35.6%
Fingal County Council	52.0	● ₃	34.5%
FOLD Ireland	1.7	●	18.0%
Food Safety Authority of Ireland	0.2	●	81.7%
Forensic Science Laboratory	1.3	● ₂	34.0%
Foyle, Carlingford and Irish Lights Commission	0.4	●	34.5%
Galway City Council	23.0	● ₃	31.6%
Galway County Council	27.5	● ₃	30.8%
Galway Education Centre	0.1	●	45.4%
Galway Mayo Institute of Technology	13.1	●	29.4%
Galway Roscommon Education & Training Board	13.0	●	23.2%
Garda Inspectorate	<0.1	●	43.4%
Garda Ombudsman Commission	1.1	●	52.4%
Gas Networks Ireland	10.0	●	46.4%
Good Shepherd Cork	0.6	●	-6.1%
Grangegorman Development Agency	0.3	●	75.2%
Health & Safety Authority	0.9	●	29.7%

The overall status of energy efficiency improvement on baseline for 2019 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 2019; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2

SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Health Products Regulatory Authority	1.4	●	44.9%
Heritage Council	0.2	●	27.7%
Higher Education Authority Irish Research Council	0.3	●	56.7%
Horseracing Ireland	1.3	● ₂	50.6%
Houses of the Oireachtas Service	12.3	●	32.2%
Housing and Sustainable Communities Agency	0.3	●	59.3%
Housing Finance Agency	<0.1	●	24.8%
HSE	1,047.2	●	25.8%
Iarnród Éireann / Irish Rail	635.0	●	35.8%
IDA Ireland	5.4	● ₂	54.4%
Incorporated Orthopaedic Hospital of Ireland	2.7	●	52.9%
Inishowen Development Partnership	0.1	●	34.3%
Inland Fisheries Ireland	7.0	●	29.3%
Inspector of Prisons and Places of Detention	<0.1	●	2.6%
Institute of Public Administration	1.0	●	10.9%
Institute of Technology Carlow	8.8	●	42.5%
Institute of Technology Sligo	8.9	●	37.6%
Institute of Technology Tralee	7.2	●	46.1%
InterTradelreland	0.4	●	42.0%
Irish Aviation Authority	20.8	●	41.1%
Irish Blood Transfusion Service	12.0	●	41.6%

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Irish Film Classification Office	0.1	●	9.0%
Irish Greyhound Board / Bord na gCon	7.0	●	42.8%
Irish Human Rights & Equality Commission	0.3	●	65.3%
Irish Prison Service	110.3	●	11.4%
Irish Water	1,077.0	● _{3a}	32.1%
Irish Wheelchair Association	7.3	●	38.7%
KARE	2.4	●	65.5%
Kerry County Council	41.3	● ₃	37.9%
Kerry Education & Training Board	5.8	●	20.8%
Kildare & Wicklow Education & Training Board	15.2	●	43.1%
Kildare County Council	42.8	● ₃	24.0%
Kildare Education Centre	0.2	●	30.4%
Kilkenny & Carlow Education & Training Board	6.1	●	21.5%
Kilkenny County Council	22.7	● ₃	34.0%
Kilkenny Education Centre	0.2	● ₂	5.4%
Labour Court	0.3	●	39.5%
Laois & Offaly Education & Training Board	6.6	●	12.4%
Laois County Council	18.1	● ₃	43.2%
Laois Education Centre	<0.1	●	66.6%
Law Reform Commission	0.2	● ₄	79.1%
Léargas – The Exchange Bureau	<0.1	● ₂	62.6%
Legal Aid Board	3.3	●	24.5%

The overall status of energy efficiency improvement on baseline for 2019 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 2
SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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.

Note 4
Aspects of the public body's data could not be verified because of COVID-19 health restrictions. SEAI will endeavour to verify this data next year.

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Legal Services Regulatory Authority	<0.1	●	49.7%
Leitrim County Council	21.0	● ₂	18.5%
Leopardstown Park Hospital	3.9	●	20.4%
Letterkenny Institute of Technology	5.7	●	52.4%
Limerick & Clare Education & Training Board	17.1	●	26.8%
Limerick City & County Council	41.2	● ₃	27.6%
Limerick Education Centre	0.3	●	-7.4%
Limerick Institute of Technology	13.7	●	44.2%
Local Government Management Agency	1.7	●	44.2%
Longford & Westmeath Education & Training Board	5.9	●	40.3%
Longford County Council	10.8	● ₃	37.4%
Louth & Meath Education & Training Board	19.0	●	3.4%
Louth County Council	26.0	● ₃	43.6%
Marine Institute	26.9	●	19.7%
Mary Immaculate College Limerick	10.1	●	26.4%
Marymount University Hospital and Hospice	5.1	●	36.8%
Mater Misericordiae University Hospital	70.0	●	35.6%
Maynooth University, NUIM	37.1	●	37.2%
Mayo County Council	35.9	● ₃	29.3%
Mayo Education Centre	0.2	●	-14.1%
Mayo Sligo & Leitrim Education & Training Board	9.8	● ₂	-39.6%
Meath County Council	35.8	● ₃	24.9%

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Medical Bureau of Road Safety	1.0	● ₂	32.7%
Mental Health Commission	0.3	●	-18.6%
Mercy Hospital	12.1	●	41.0%
Met Éireann	1.9	●	7.2%
Milford Care Centre	5.4	●	22.3%
Monaghan County Council	12.9	● ₃	37.1%
Monaghan Education Centre	0.2	●	-0.3%
Muiriosa Foundation	10.2	●	35.7%
National Archives	1.2	●	50.8%
National Cancer Registry Board	0.2	●	13.5%
National College of Art and Design	4.1	●	45.7%
National Council for Special Education	0.7	●	11.9%
National Disability Authority	0.5	●	30.1%
National Economic and Social Development Office	0.3	●	30.4%
National Gallery	12.4	●	46.9%
National Library of Ireland	3.5	●	33.6%
National Maternity Hospital	9.8	●	9.5%
National Milk Agency	<0.1	●	37.7%
National Museum of Ireland	13.3	●	14.3%
National Oil Reserves Agency	0.2	●	54.4%
National Rehabilitation Hospital	6.3	●	-47.7%
National Shared Services Office	3.3	●	8.0%
National Transport Authority	43.6	● ₅	
National Treasury Management Agency	6.2	●	50.4%

The overall status of energy efficiency improvement on baseline for 2019 is illustrated as follows:



Note 2
SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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 5
This public body submitted sufficient data to calculate a savings result for 2019. Its energy data was verified by SEAI, but SEAI has recommended that it change its approach for reporting its activity level.

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
National Treatment Purchase Fund	0.4	●	6.8%
National University of Ireland, Galway	50.7	●	39.7%
Navan Education Centre	0.2	●	56.7%
NCCA (National Council for Curriculum and Assessment)	0.3	●	46.0%
Northern & Western Regional Assembly	0.2	●	36.2%
NSAI	3.5	●	28.9%
Nursing and Midwifery Board of Ireland	0.5	●	22.6%
Oberstown Children Detention Campus	6.5	●	13.5%
Offaly County Council	16.0	● ₃	33.5%
Office of Public Works	53.0	●	20.9%
Office of the Attorney General	1.2	●	48.9%
Office of the Comptroller & Auditor General	0.8	●	45.3%
Office of the Director of Corporate Enforcement	0.7	●	31.6%
Office of the Director of Public Prosecutions	1.3	●	59.2%
Office of the Ombudsman	1.1	●	27.9%
Office of the Ombudsman for Children	0.2	●	22.0%
Office of the Ombudsman for the Defence Forces	<0.1	●	31.1%
Oifig an Choimisinéara Teanga	0.1	●	30.3%
Ordnance Survey Ireland	4.2	●	8.5%
Our Lady's Hospice Harold's Cross Limited	12.8	●	21.1%

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Peamount Hospital Newcastle	9.8	●	14.9%
Permanent TSB	23.3	●	23.6%
Personal Injuries Assessment Board	0.4	● ₂	63.6%
Pobal	0.7	●	73.4%
Port of Cork Company	22.8	●	37.4%
Port of Galway	0.9	● ₁	71.3%
Port of Waterford Company	3.3	●	73.2%
Pre-Hospital Emergency Care Council	<0.1	●	69.3%
President's Establishment	3.2	●	-0.9%
Private Security Authority	0.2	●	21.7%
Probation Service Agency of Dept of Justice & Equality	4.6	●	20.4%
Professional Development Service for Teachers	<0.1	●	60.1%
Property Service Regulatory Authority	0.2	●	64.7%
PSI – the Pharmacy Regulator	0.8	●	42.2%
Public Appointment Service	1.6	●	49.5%
Quality and Qualifications Ireland	0.3	● ₂	3.5%
Raidió Teilifís Éireann	63.2	●	51.8%
Regulator of the National Lottery	<0.1	●	14.6%
RehabGroup	14.0	● ₂	35.2%
Residential Tenancies Board	1.0	●	52.8%
Revenue Commissioners	45.0	●	35.4%
Road Safety Authority	2.3	●	18.2%
Roscommon County Council	18.2	● ₃	29.4%

The overall status of energy efficiency improvement on baseline for 2019 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 2019; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2
SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Rotunda Hospital	10.2	●	5.7%
Royal College of Surgeons in Ireland	18.0	●	36.2%
Royal Hospital	6.4	●	7.6%
Royal Irish Academy	0.4	●	26.8%
Royal Irish Academy of Music	0.7	●	7.8%
Royal Victoria Eye and Ear Hospital	3.7	● ₂	-29.4%
safefood	0.4	● ₂	42.7%
Saint John of God Community Services clg	37.6	●	7.3%
Science Foundation Ireland	0.3	● ₂	69.6%
Screen Ireland	0.1	● ₁	-168.5%
Sea Fisheries Administration Division	5.0	●	31.8%
Sea Fisheries Protection Authority	1.9	● ₂	15.5%
Shannon Airport Authority DAC	24.3	●	30.3%
Shannon Commercial Properties	0.8	●	58.4%
Shannon Foynes Port Company	3.0	●	30.4%
Sligo County Council	15.5	● ₃	26.3%
Sligo Education Centre	0.1	● ₄	-30.0%
SOLAS	1.5	● ₂	48.3%
SOS Kilkenny Ltd	1.4	●	51.0%
South Dublin County Council	47.4	● ₃	34.4%
South Infirmary – Victoria Hospital	9.6	●	0.5%
Southern Regional Assembly	0.1	●	71.9%
Special EU Programmes Body	<0.1	●	31.6%
Sport Ireland	34.5	● ₅	

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
St Josephs Foundation	4.6	● ₂	48.0%
St. Angela's College Sligo	2.0	● ₂	58.2%
St. Catherine's Association Ltd	1.1	● ₂	22.8%
St. Christopher's Services Ltd	1.7	●	25.5%
St. Cronan's Association CLG	0.5	●	4.4%
St. Francis Hospice	4.8	●	29.2%
St. James's Hospital	84.0	●	16.8%
St. John's Hospital	3.7	●	31.6%
St. Michael's Hospital	5.5	●	18.4%
St. Michael's House	14.7	●	25.5%
St. Patrick's Centre Kilkenny	3.5	●	66.7%
St. Vincent's Hospital Fairview	4.0	●	26.6%
St. Vincent's University Hospital	46.5	●	38.8%
State Examinations Commission	1.5	●	26.3%
State Laboratory	9.7	●	70.2%
Stewarts Care Ltd	12.9	●	26.4%
Sunbeam House Services	4.2	●	6.6%
Sustainable Energy Authority of Ireland	0.5	●	45.8%
Tallaght University Hospital	40.5	●	29.1%
Teaching Council	0.5	●	48.5%
Teagasc	37.4	●	28.8%
Technological University Dublin – Blanchardstown Campus	5.9	●	65.7%
TG4	2.4	●	44.9%
The Bessborough Centre	0.9	●	49.2%

The overall status of energy efficiency improvement on baseline for 2019 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 2019; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2
SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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 4
Aspects of the public body's data could not be verified because of COVID-19 health restrictions. SEAI will endeavour to verify this data next year.

Note 5
This public body submitted sufficient data to calculate a savings result for 2019. Its energy data was verified by SEAI, but SEAI has recommended that it change its approach for reporting its activity level.

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
The Health Information & Quality Authority (HIQA)	1.4	●	48.2%
The Health Insurance Authority	<0.1	● ₂	23.7%
The Health Research Board	0.3	●	53.7%
The Insolvency Service of Ireland	0.6	●	52.1%
The Irish Museum of Modern Art	6.1	●	29.1%
The Land Development Agency	0.6	○ ₆	0.0%
The Medical Council	0.8	●	36.8%
The National Concert Hall	3.2	●	25.0%
The Pensions Authority	0.4	●	40.1%
The Property Registration Authority	3.8	●	29.2%
Tipperary County Council	44.0	● ₃	38.9%
Tipperary Education & Training Board	7.6	●	10.9%
Tourism Ireland	0.2	●	59.2%
Transport Infrastructure Ireland	120.9	●	29.9%
Trinity College Dublin	117.7	●	31.9%
TU Dublin, Tallaght	8.3	●	41.4%
Údarás na Gaeltachta	4.2	● ₂	40.0%
University College Cork	90.7	●	44.5%
University College Dublin	117.5	●	35.2%
University of Limerick	70.1	●	29.8%
Valuation Office	0.8	●	13.4%
Valuation Tribunal	<0.1	● ₁	
Voluntary Health Insurance Board	9.9	●	36.6%
Water Safety Ireland	0.3	●	-18.4%

Public Body	2019 Energy Consumption (Primary)	Overall Status (2019)	Energy Savings Since Baseline
	GWh		%
Waterford & Wexford Education & Training Board	13.3	●	40.0%
Waterford City & County Council	38.6	● ₃	23.6%
Waterford Institute of Technology	18.2	●	42.9%
Waterford Teachers' Centre	0.2	●	8.4%
Waterways Ireland	8.8	●	1.8%
West Cork Education Centre	0.1	●	-18.7%
Western Care Association	5.3	●	30.1%
Western Development Commission	<0.1	●	59.2%
Westmeath County Council	24.2	● ₂	18.7%
Wexford County Council	33.6	● ₃	28.7%
Wicklow County Council	34.1	● ₃	16.2%
Workplace Relations Commission	1.4	●	15.6%

5.2.2 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 2019 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.

Nua Healthcare Services

The overall status of energy efficiency improvement on baseline for 2019 is illustrated as follows:



Note 1
Public body submitted sufficient data to calculate a savings result for 2019; however the result lies beyond the expected range of probable energy performance and needs verification.

Note 2
SEAI identified aspects of the data submitted at the reporting deadline that needed to be addressed. Public body may have addressed these aspects prior to calculation of the published savings result.

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 6
Tracked from a 2019 baseline.

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 November 2020. All public bodies will be required to report their 2020 consumption before the cycle ends in late April 2021; 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. 2019). 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 an 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 2019 data involved an assessment of 32% of public bodies that reported data.

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

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.

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), Combined Heat and Power (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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