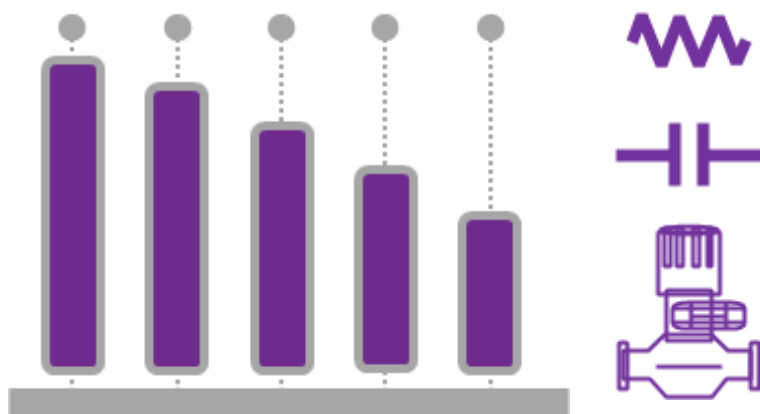


MONITORING & REPORTING ENERGY USE

Workbook for Schools



Monitoring & Reporting Energy Use

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What is M&R?

The National Energy Efficiency Action Plan to 2020 has set the Public Sector a target to improve energy efficiency by 33% and to lead by example. In response to this, SEAI and the Department of Communications Energy & Natural Resources have developed an **on-line energy Monitoring and Reporting (M&R) system** to help public sector organisations, including schools, track their progress towards the 2020 energy efficiency target.

As well as enabling you to report and track your school's energy data annually, the online system provides you with

- **A scorecard** that presents a powerful snapshot of the school's progress to date.
- **Online access to your annual electricity and natural gas consumption data**, which is particularly useful if you have changed supplier over the years.

The M&R Workbook has been designed to help you compile the necessary information and make the process as quick and easy as possible.

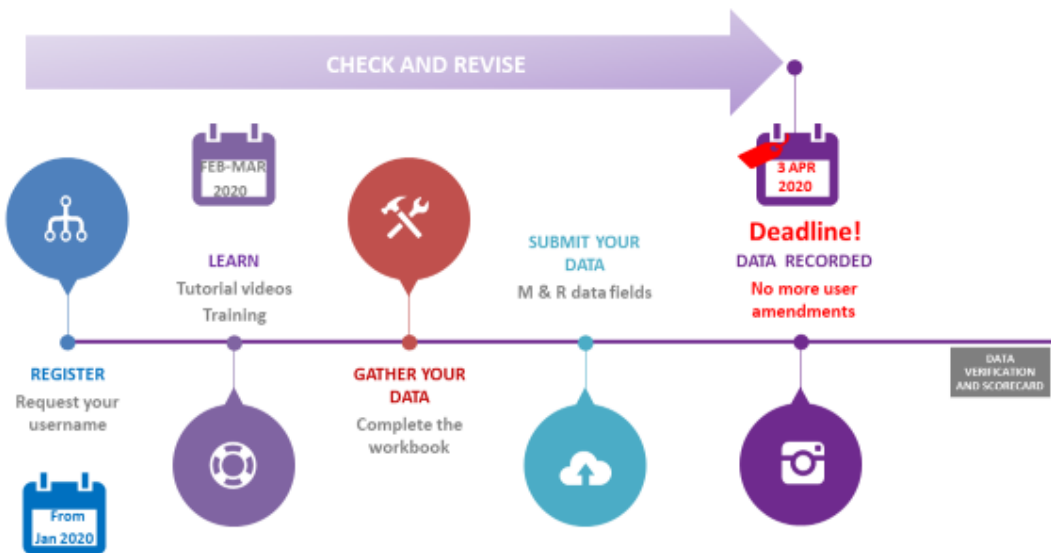
Why do Schools have to do this?

Public sector bodies are required to report annually on their energy usage and actions taken to reduce consumption in accordance with [Statutory Instrument 426 of 2014](#). These regulations transpose the Energy Efficiency Directive ([Directive 2012/27/EU](#)) into Irish law.

The target for improved energy efficiency for the school sector *in aggregate* is 33%. Each school is expected to contribute towards this. The M&R system tracks each school's contribution, by expressing its performance with respect to a 33% improvement by 2020.

Each school (except ETB schools¹) is required to report energy performance directly to SEAI each year – to track progress towards the 2020 target. This requirement is met by completing your submission on the M&R system. Each year, SEAI will publish a report on energy efficiency in the public sector, which will include details of the energy performance of each school.

¹ ETB schools report through their ETB, i.e. each ETB is required to report on behalf of its entire organisation, including for the schools within its aegis.



How do we start?

Register for the Online System

- Request your username by sending your contact details & Roll number to Mandr@seai.ie.
- If you have reported previously or already have login details, you're already registered.

Learn about M&R

- Login & explore the system.
- Browse the supports available at <https://www.seai.ie/schoolsmandr/>
- Attend a free training session between February and March 2020 (limited availability). For details see <https://www.seai.ie/schoolsmandr/>

Next steps & Gathering Your Data

- Complete this workbook and use the tutorial videos at <https://www.seai.ie/schoolsmandr/>
- **You will need to gather the following key data BACK TO 2013**
 - Meter numbers for electricity and natural gas – Once you enter meter numbers (MPRNs/GPRNs), consumption data is sourced automatically from the meter operator for you, so you **DO NOT** need to gather consumption data from bills.
 - You **DO** need to gather consumption data for heating fuels which are not metered such as oil or LPG and any other energy types you use, e.g. wood chip, diesel, petrol.
 - The number of pupils in the school.
 - Number of fulltime staff.
 - Floor area of school in square metres.

These details will be required as part of your report on an annual basis.

- From when you submit your meter numbers (MPRNs/GPRNs), it takes some time for your electricity and natural gas consumption data to be supplied.
 - Keep records for future reference & verification as you must report your energy data annually
- You will need to make a complete submission for each year up to and including 2020.

Compile all the required details in this section, then go on-line to make your report

LOGIN DETAILS	
Roll number:	
Username:	For your username you will need a valid e-mail address. Request your password by sending your school name, primary contact name and Roll Number to MandR@seai.ie
Password:	Login ¹ to the M&R system at: https://psmr.seai.ie

¹**Helpful Hint:** If you have difficulties logging in contact the SEAI's dedicated M&R helpdesk at: MandR@seai.ie or 01 8082012

Navigating the M&R System

- Once you have logged in and accepted terms and conditions of use you will see three boxes: 'Submit Your 2019 Report', 'Review Your Performance', 'Manage Your Meters'.
You will be able to make all of your submission through 'Submit Your 2019 Report', although 'Review Your Performance' is a powerful tool to help you better manage your energy consumption over the medium to long term.
- The '**Manage Your Meters**' section is where details of your electricity and natural gas meter numbers will appear but they can also be accessed through 'Submit Your 2019 Report'. They may already be in the system when you log-in or you may need to add them (this workbook will tell you how).
- On selecting '**Submit Your 2019 Report**', you will see a number of boxes or 'tiles' numbered 1 to 3 with large red exclamation marks in the top right-hand corner of each.
 - Clicking on the '?' symbol provides help
 - To complete your report, you should enter data on school details, energy consumption and energy saving projects by clicking on Review & submit your data on each tile. On each screen, you will be asked to enter data and to answer some questions. A red asterisk means that you must enter data in the corresponding fields before you can continue to the next screen. Use the 'back' and next buttons to navigate through the system and review the data you have entered. As you complete each screen and tile a large green tick will replace the red triangle with the exclamation mark.
- The final tile prompts you to 'View your scorecard'. This jumps you to the '**Review Your Performance**' page, where you can view:
 - 'Your Scorecard': a simple graphic of your actual energy performance.
 - 'Your Consumption Profile': here you can use the 'Download to CSV' function (normally in the top right-hand corner, but sometimes at the bottom of the web page) to keep a spreadsheet record of what you have submitted. The left-hand menu allows you to view a 'Consumption Summary', 'MPRN Consumption Profile', 'GPRN Consumption Profile' or 'Detailed Energy Data'.
 - 'Data for Publication': data for use in your annual report and the data that SEAI will publish in its annual report on energy efficiency in the public sector.
 - 'Data Inputs': a summary of the data you have entered and the option to download monthly MPRN (electricity) data

TILE 1: Your school:	ADD YOUR DETAILS BELOW	
School Name:		
Address: NB: You will need to provide an Eircode (postcode) for your school, you can find this at www.eircode.ie .		
Primary Contact:		
Tel/Email:		
Principal:		
Email:	<i>If the principal is not the primary user, then separate email addresses are required for the primary user and the principal.</i>	
Alternative Contact ² :		
Tel/Email:		
²Helpful Hint: <i>It is good practice to provide an alternative contact as this is a long-term reporting obligation. A primary contact might be the person who is directly involved in making the energy submission annually. Consider adding a Board of Management member or staff member as a user so that they receive notifications issued by the system in the event that the primary contact is not in school for any reason.</i>		
Energy Management at your school	You will be asked if your school has an energy management programme and if you have reviewed it during 2019. If so, you can select from a range of options as to how you approached this e.g. the Green Schools Energy Flag, Energy in Education programme or other.	

Baseline Period & Activity Metrics:	ADD YOUR DETAILS BELOW
Select your baseline period ³	<input type="checkbox"/> 2013 <input type="checkbox"/> 2012 <input type="checkbox"/> 2011 <input type="checkbox"/> 2010 <input type="checkbox"/> 2009 <input type="checkbox"/> 2006-2008 (average) <input type="checkbox"/> 2001-2005 (average)

Report values for pupil numbers, staff numbers and floor area ⁴	N.B. You only need to complete this table back to 2013 unless you pick an earlier baseline									
		Unit	2020	2019	2018	2017	2016	2015	2014	2013
	Full-time Pupils	no.								
	Total Useful Floor Area	m ²								
	Full-time Equivalent Employees	no.								
	If the school opens outside of school hours for evening or other formal educational classes									
	Number of extra hours over the year	no.								
Average pupil number in the school during each hour outside of normal school classes	No.									

³**Helpful Hint:** Baseline period: This is the point in time against which you will measure your progress in saving energy. **YOU MUST TO SELECT A BASELINE YEAR.** You can select 2013 or if you have completed any energy efficiency works prior to 2013 (e.g. insulation under the 2009 summer works programme) that you would like to capture in your energy performance scorecard choose an earlier baseline. The system can import electricity (MPRN) and natural gas (GPRN) data as far back as 2006 from the meter operator once you confirm your meter numbers. Bear in mind that if you wish to go back as far as 2001 you will have to work out your energy consumption from paper bills for the years 2001-2005 inclusive.

⁴**Helpful Hint:** All schools are asked to enter full time pupils, total useful floor area (TUFA), full time equivalent employees (FTEE) for each year. If your school is open outside of the normal school day for evening classes or other formal education classes you will be asked to enter the approximate number of hours, and the average number of students for each additional hour.

For floor area, ask your architect or consult the school plans; if you do not have accurate drawings or a survey providing floor area, then see if you have a Display Energy Certificate (DEC) which would provide the floor area; failing that, measure as accurately as you can, and make a note to record the school's total useful floor area should the opportunity arise for an accurate building survey. Be careful to record changes in floor area, e.g. the addition of an extension.

The OECD defines **FTE employment** as follows: "Full-time equivalent employment is the number of full-time equivalent jobs, defined as total hours worked divided by average annual hours worked in full-time jobs."

TILE 2: Energy Consumption	ADD YOUR DETAILS BELOW		
Select the energy types you use ⁵	Electricity	Thermal (i.e. heating)	Transport
	<input type="checkbox"/> Electricity (MPRN ⁶ data) <input type="checkbox"/> Other - _____	<input type="checkbox"/> Gas > Natural Gas (GPRN ⁶ data) <input type="checkbox"/> Gas > LPG (purchased by volume/litres) <input type="checkbox"/> Gas > LPG (purchased by weight/kg) <input type="checkbox"/> Heating Oils> Kerosene <input type="checkbox"/> Heating Oils> Gasoil <input type="checkbox"/> Other _____	<input type="checkbox"/> Not applicable <input type="checkbox"/> Road diesel (DERV) <input type="checkbox"/> Petrol <input type="checkbox"/> Other _____
<p>⁵Helpful Hint: Most schools only have electricity and heating by means of natural gas, LPG, kerosene or gasoil. Some schools may differ from the norm, e.g. may have on-site wind generation of electricity, a wood chip boiler for heating, or may own a school bus which consumes road diesel (DERV). Consider only energy consumption which is attributable to the school operations. Staff mileage and staff/student commutes to and from school are excluded unless transport is provided by the school.</p>			
Enter & validate your MPRNs & GPRNs ⁶	Electricity MPRNs	Are the bills for the electricity account(s) addressed to your school and has the school been responsible for paying all of these bills for all years since the chosen baseline?	Has the school consumed all of the electricity through each of these meter(s) since the chosen baseline?
	Natural Gas GPRNs	Are the bills for the electricity account(s) addressed to your school and has the school been responsible for paying all of these bills for all years since the chosen baseline?	Has the school consumed all of the electricity through each of these meter(s) since the chosen baseline?
<p>⁶Helpful Hint: You can find your Meter Point Reference Number (MPRN) or Gas Point Registration Number (GPRN) on any of your past bills, usually in the top right-hand corner. Your MPRN will be 11 digits, and your GPRN will be 7 digits or less. <u>If you enter your MPRNs and GPRNs before 1 May 2020, the M&R system will import kWh consumption from the electricity and natural gas meter operators so that you don't have to sort through bills.</u> If you have entered meter details in previous years you will be asked to review and confirm them. Your electricity and gas data takes a short while to compile and will be available to view in the system in August.</p> <p>If your school is not the listed end user for a meter you will be asked a few additional questions to establish if you have their consent to supply the meter number to SEAI so they can request the consumption data from the meter operator. Note that if you ever consumed electricity through an MPRN between your chosen baseline and now you should keep it in your list of MPRNs.</p> <p>In most circumstances all of the energy consumed through the meter will have been consumed by the school. In some cases, where a school might share premises with</p>			

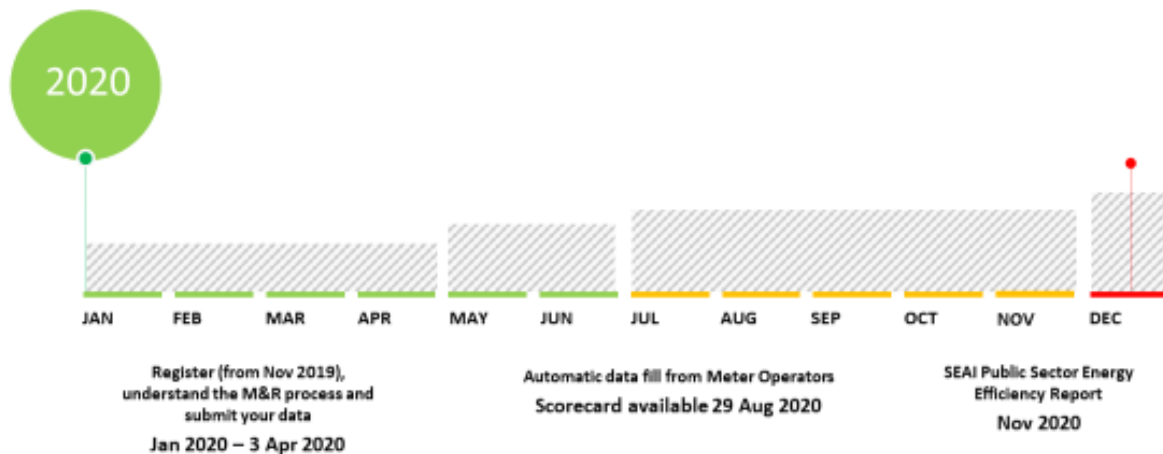
TILE 3: Energy Saving Projects: ⁷		ADD YOUR DETAILS BELOW	
Report the projects that you have completed so far		Project	kWh savings
List the projects that you plan to implement			

⁷Helpful Hint: Click 'Update Projects' and then 'Add Project' for each project you have planned or completed. A dialogue box will open up prompting you to enter more detail including kWh savings, the project type, whether you purchased energy using equipment or vehicles under SEAI's [Triple E](#) list, and if the energy savings were verified. For completed projects, you may not know how much energy has been saved. In this instance we suggest you get in touch with your designer (architect or mechanical & electrical engineer) or contractor and query them on likely savings. It is likely such savings are estimated rather than verified, in which case you select 'None' under the 'Verification Methodology' drop-down. Alternatively, the designer may be able to provide you with 'Projected Savings' or a 'Retrospective Analysis of Savings.'

For planned projects, we recommend you always ask your designers or contractor if they can verify the energy savings achieved for a significant energy efficiency project. If they are unsure about how to do this, you may seek the assistance of an independent energy assessor with verification expertise.

View your past performance: You can review your scorecard, your consumption profile over the years and your data for publication.

By clicking on 'Data Inputs > All Data Inputs', you can 'Download to CSV' all the data you submitted in the form of a spreadsheet. We recommend you do this annually for backup. Note that you can also download your MPRN Monthly data, which is an excellent energy management tool for assessing electricity saving projects you completed in the past.



Key dates and Deadlines

What data will you need to enter into the system before 1 May 2020?

- ✓ Complete your school details.
- ✓ Select your baseline year.
- ✓ Enter your Electricity & Natural Gas Meter Numbers (MPRNs & GPRNs) information.
- ✓ Other energy types: If the school uses other fuels (e.g. heating oil, LPG, solid fuels) then you will need to enter the school's annual usage in litres, kg, kWh etc., from the baseline year. Ask your suppliers for a complete statement of fuel deliveries, which might save you time going through paper records/delivery dockets and accounts.
- ✓ Number of full time students, number of full time equivalent employees and the floor area. This information is needed from the baseline year for each year. If you have additional classes outside of normal school hours you will be asked the number of additional hours per year as well as the average number of students attending these outside of normal hours classes.
- ✓ Energy saving projects, both implemented and planned, an included kWh savings.

Help and Guidance

We hope that this Workbook and the accompanying videos have answered all your questions in relation to Monitoring & Reporting of your energy performance. If you are interested in attending a free training workshop you will find details at <https://www.seai.ie/energy-in-business/monitoring-and-reporting/for-schools/>

In the unlikely event that your query is not addressed in the workbook, tutorial videos or other guidance materials you can also email the M&R helpdesk at MandR@seai.ie or phone 01 8082012

Lexicon

Activity Metric: For schools this is the number of fulltime pupils in the school for the year.

Baseline year: This is the point in time against which you will measure your progress in saving energy.

GPRN: A Gas Point Registration Number (GPRN) is a unique reference number assigned to every natural gas connection in Ireland. GPRNs have up to 7 digits. Your GPRN stays the same even if you change natural gas supplier.

MPRN: A Meter Point Reference Number (MPRN) is a unique 11-digit number assigned to every single electricity connection and meter in the country. Your MPRN stays the same even if you change electricity supplier.

Total useful floor area (TUFA): TUFA is the floor area of buildings in which energy is used for heating, cooling or ventilation etc. Buildings in which no energy is used for heating, cooling or ventilation should not be included in the TUFA calculation, e.g. sheds.