



Public Sector Energy Monitoring & Reporting System

Frequently Asked Questions (FAQ)

Public Bodies (non-schools)

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1 LEGISLATION & KEY OBLIGATIONS

1.1 What are the Public Sector's energy efficiency obligations?

The National Energy Efficiency Action Plan (NEEAP) and the European Union (Energy Efficiency) Regulations 2014 (SI No. 426 of 2014) set out several obligations on public bodies with respect to their “exemplary role” for energy efficiency. These include obligations with regard to:

- Energy efficient procurement;
- Exemplar energy management practices;
- Energy audits;
- Energy services;
- Use of energy efficient buildings – public bodies may only purchase or lease buildings with Building Energy Ratings of A3 or higher;
- Maintenance and construction of energy efficient buildings;
- Reporting data.

1.2 What are the Public Sector energy efficiency targets?

The latest National Energy Efficiency Action Plan (NEEAP) re-affirmed Government's commitment to a stretching 33% target for the sector: *“The public sector will improve its energy efficiency by 33% and will be seen to lead by example — showing all sectors what is possible through strong, committed action.”* The 33% target is an *energy efficiency* target and it applies to all public bodies, i.e. all public bodies must improve their energy efficiency by 33% by 2020. It is equivalent to 3,240 GWh across the entire sector (primary energy equivalent).

1.3 What are the Public Sector's obligations with respect to reporting energy savings?

Since 1st January 2011 public sector bodies are required to report annually on their energy usage and actions taken to reduce consumption – in accordance with SI No. 426 of 2014 (and previously with SI 542 of 2009). There are two key obligations:

- Requirement to report the organisation's energy performance directly to SEAI each year – to track progress towards the 2020 target (Regulation 5(3), SI No. 426 of 2014);
- Requirement to include a statement on the organisation's energy performance in the organisation's own annual report (Regulation 5(5), SI No. 426 of 2014).

1.4 From when do the reporting obligations apply?

All annual reports published after 1st January 2011 must include a section on energy performance.

All public bodies must report their energy data to SEAI from 2013 onwards (they must provide data going back to their baseline {FAQ 13.12}).

1.5 Which organisations have to report?

For the purposes of the target, the public sector is 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.

The formal definition of a “public body” is set out in Regulation 4 of SI 426 of 2014.

1.6 What’s in it for our organisation?

There is a real ‘business case’ for investing in better energy management in the Public Sector: energy savings reduce costs and free up budget that can be allocated to ‘core’ activities. They also reduce CO₂ emissions and deliver other environmental benefits as well as improving energy security at both organisational and national levels.

The reporting system can create value for your organisation. It is a powerful tool for tracking, benchmarking and improving your energy performance.

1.7 How does the monitoring & reporting system work?

The key principles of the system are:

- Individual public bodies report their energy consumption for *all fuel types* (electricity, thermal fuels and transport fuels (including fossil and renewables)) at an *organisational level*.
- Public bodies report baseline {FAQ 13.12} data on a once off basis (default baseline is 2009, but public bodies can elect to use earlier baselines).
- Public bodies then report their energy consumption *annually* for the previous year.
- For electricity & natural gas, all public bodies have to do is submit their meter numbers once to SEAI (MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2}). 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.
- Each year, public bodies self-report their total consumption subtotals for all non-network connected energy sources (e.g. heating oils, LPG, solid fuels, diesel) directly to SEAI.
- Each year, public bodies self report an activity metric {FAQ 12.1} that describes the activity level in their organisations.
- Savings are calculated by comparing changes in each public body’s energy consumption and activity metric each year.

Detailed information on different elements of the methodology is included in this FAQ.

1.8 What are the benefits to us in using the system?

As well as enabling you to fulfil your legal obligations with respect to reporting, using the system offers several benefits to your organisation:

- Provides a summary of your organisation's overall energy performance for reported years – through an attractive energy performance scorecard;
- Gives you access to your organisation's electricity and natural gas consumption data for recent years;
- Helps you understand your energy consumption, target areas for improvement, identify opportunities, review progress, monitor & benchmark performance and validate savings – all at an organisational-level;
- Opportunity to compare your progress in making savings to date with that of other public bodies and to showcase your achievements;
- Catalyst for wider good energy management practices;

2 WHAT IS A PUBLIC BODY?

2.1 What is the ‘Public Sector’ (in the context of these obligations)?

For the purposes of the target, the public sector is 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. The formal definition of a “public body” is set out in Regulation 4 of SI 426 of 2014.

The following are some of the main energy consumers in the public sector:

- Buildings, e.g. offices, hospitals, clinics, nursing homes, schools, universities, prisons, barracks, Garda stations etc.
- Utilities, e.g. waste water treatment plants, water treatment facilities, pumping stations, street lighting.
- Public transport fleets, e.g. Iarnród Éireann, Bus Éireann, Luas.
- Other transport fleets, e.g. ambulances, local authority waste collection vehicles, other local authority vehicles & diesel-fuelled machinery, Garda fleet, An Post fleet, Defence Forces’ vehicles, naval vessels etc.

While the targets do include commercial semi-state organisations such as ESB and Bord na Móna, they do not apply to the energy consumed (including losses) by these organisations in their energy transformation processes. However, the energy used in buildings occupied by such organisations and by the vehicles that they operate is included.

2.2 Which organisations have to report annually?

The energy consumption and energy performance of the following organisations must be reported annually:

- Those defined as public bodies in Regulation 4 of SI 426 of 2014;
- 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.

2.3 Are charities that are funded by public bodies included?

The energy consumed by schools, universities and non-private hospitals is considered ‘public sector’. Therefore, all schools, universities and hospitals (including voluntary hospitals) have to report, including those that are registered charities.

Other charities that would not be considered as public bodies under the definition in SI 426 of 2014 or NEEAP do not have to report, unless they are in receipt of 75% or more of their funding from the public sector. If they fall above this funding threshold, then they must report.

2.4 Are voluntary hospitals included?

Yes. The energy consumed by non-private hospitals (including voluntary hospitals) is considered 'public sector'. Voluntary hospitals are considered to be standalone public bodies and must report individually in their own right.

2.5 Are nursing homes included?

Publicly owned nursing homes are included.

Charity owned nursing homes in receipt of 75% or more of their funding from the public sector are included.

Privately-owned nursing homes and charity-owned nursing homes in receipt of less than 75% of their funding from the public sector are not included.

Qualifying nursing homes should report via their parent organisation.

2.6 Are schools obliged to report?

Yes.

Schools and centres for education, as defined in section 2 of the Education Act 1988, are specifically designated as public bodies in the context of the public sector's exemplary role with respect to energy efficiency (in SI 426 of 2014).

The approach to reporting depends on the school type.

- The sixteen Education & Training Boards (ETBs) are required to report at an ETB level, i.e. each ETB reports in aggregate on behalf of the schools under its aegis{FAQ 15.5};
- All other schools are required to report on a school by school basis.

3 WHAT'S INCLUDED? WHAT'S NOT INCLUDED?

3.1 Is residential accommodation included?

Some is and some is not.

If your organisation provides residential accommodation for your staff or for 'customers', then the energy consumption of this accommodation should be reported. This includes, among others, university, college & school residential accommodation, and barracks.

However, neither local authority housing nor HSE housing is counted – so neither local authorities nor the HSE have to report on the consumption attributable to these end users.

3.2 Are *public* group water schemes included?

The energy consumed in supplying water to public group water schemes is included and should be reported as part of the local authorities' consumption.

The energy consumption of a group's private or co-op operator in distributing the water is not considered public sector.

3.3 Are *private* group water schemes included?

No.

3.4 Our organisation contracts the provision of a service or functional activity to a (private) contractor – is this included?

Yes.

If a contractor provides a service to third parties on behalf of your organisation, then the consequent energy use by the contractor is reportable within your organisation's energy consumption. Examples include (but are not limited to): waste contractors contracted to local authorities to provide waste management services within their jurisdictions; PPP projects; operation of local authority leisure centres; etc.

If your organisation contracts or outsources the undertaking of a functional activity on your organisation's behalf, then the consequent energy use by the contractor is reportable within your organisation's energy consumption. Examples include (but are not limited to): staff canteen services {FAQ 3.5}; data centre services {FAQ 3.19}; cloud computing (large scale); ESCo-operated energy facilities {FAQ 3.6}.

Note that the above guidance should not be interpreted as including every single activity or service for which your organisation contracts a service provider. The overarching principle is that the public sector cannot reduce its energy consumption – or circumvent part of its energy efficiency obligations – by outsourcing or subcontracting activities.

Examples of contracted services that are not within the scope of your organisation's energy consumption include (but are not limited to): professional & legal services; delivery of goods or consumables to your organisation (unless the delivery is a core activity of your organisation); outsourced cloud computing (small scale); etc.

3.5 Are shared services included?

Yes. Shared services are included in public sector consumption – in all cases. However, there are two alternative approaches to allocating the relevant energy consumption among public bodies:

- *Default approach:* the energy consumption attributable to the portion of the shared services consumed by the public body is reportable by the public body that benefits from the service, i.e. the public body that benefits from the service reports the attributable consumption. Public bodies that provide shared services *must* exclude the portions of consumption attributable to the organisation(s) to which they provide these services.
- *Alternative approach:* this approach must only be used if the party providing the shared service is a public body reporting through the M&R system and if all of the relevant public bodies agree to use the alternative approach. The alternative approach is for the public body that provides the shared services to report *all of the consumption associated with the provision of the services to all of its 'customers'* as its own and to 'account' for this through its activity metric {FAQ 12.1}. None of the public bodies benefiting from the service(s) should report any of the consumption attributable to the provision of the service(s).

The *default approach* must be used unless both of the specific conditions outlined above for the *alternative approach* are satisfied.

3.6 Some of our energy facilities are operated and maintained by a private contractor. We own the facilities. Are these facilities included?

Yes. Your public body should report the energy consumption of all of the energy facilities that provide energy services for your organisation, including those that may be managed / operated / maintained by private contractors.

3.7 Some of our energy facilities are operated, maintained and owned by a private contractor. Are these facilities included?

Yes.

Even if a private contractor owns the on-site energy assets serving a public body (e.g. boiler equipment, CHP plant etc.) the energy consumed by these facilities must be included in the relevant public body's annual submission.

If such facilities also export electricity or heat to a third party, then this exported energy flow should be deducted from the public body's consumption in accordance with the mechanism for dealing with onsite generation and/or district heating.

3.8 Are Public Private Partnerships (PPPs) included?

In general, yes:

- Design build operate (DBO) projects and close variants, in which the facility is financed by the public sector and remains in public ownership throughout the term of the contract are considered Public Sector in the context of the Monitoring & Reporting system. The energy consumption of these facilities must be included in the 'parent' public body's annual submission.
- Other PPP projects (both concession projects and design build projects that are financed by the private sector (including variants)) are also considered Public Sector in the context of the system. Therefore the energy consumption of these facilities should be included in the 'parent' public body's annual submission. However, if a 'parent' public body believes that a specific project should not be included in its annual submission, then it should make the case for this to SEAI. These will be considered on a case by case basis.

Public bodies should ensure that the provision of energy consumption data by PPP partners to public bodies is a contractual requirement.

3.9 What information must be reported for PPP partners?

Organisations should include all PPP energy consumption data (all energy types) that is attributable to the 'parent' organisation – for the reporting year and extending back to the baseline period. The data should be reported by fuel/energy type and by year. For electricity and natural gas consumption, MPRNs and GPRNs should be reported in the normal manner and care should be taken to assign the correct MPRN/GPRN validation status. If MPRNs and/or GPRNs are not available then public bodies should self report relevant quantities of electricity and/or natural gas.

Public bodies should also seek to account for PPPs in their activity metrics, which may require the PPP partner to provide relevant data to the public body – for the reporting year extending back to the baseline period.

Note that public bodies do not need to report the above data as separate 'line items', i.e. PPP consumption subtotals may be included within the organisation's overall consumption totals.

3.10 Should we report the energy consumed in leased vehicles?

Yes.

In cases where the lessor (the company leasing the vehicle to the public body) pays for the fuel consumption, the public body should ensure that the provision of energy consumption data by the lessor to the public body is a contractual requirement.

3.11 We contract with a private operator for transport services. How should we account for this?

Some public bodies contract with private operators to provide private freight or passenger transport services, e.g. taxi services, coach services, couriers, etc.

You should not report the energy consumed in the provision of these services.

3.12 Should we report staff 'mileage'?

No. Fuel purchased by staff for travel that is reimbursed via a 'mileage' payment should not be included in reported consumption.

However, if any fuel is paid for directly by the public body but consumed in staff members' own vehicles (no matter what the purpose of the travel), then this fuel should be included in the submission.

Note that it is not necessary to report this consumption as a separate line item. This consumption should be included in the relevant transport fuel sub-total, e.g. diesel, gasoline.

3.13 Should we report energy consumption for staff travel on public / commercial transport services?

No. Staff travel on public or commercial transport services (road, rail, air, water) should not be reported.

The only exception is where the mode(s) of public transport is/are owned or operated by the public body in question.

Note that you may wish to record this data internally for use in calculating your carbon footprint.

3.14 Should we include fuels used in mobile plant & equipment?

Yes. The only exception is fuel consumed directly in the construction of capital projects {FAQ 3.16}.

This applies for both plant and equipment owned by the public body and for plant and equipment leased/rented by the public body. In cases where the lessor (the company leasing the plant to the public body) pays for the fuel consumption, the public body should ensure that the provision of energy consumption data by the lessor to the public body is a contractual requirement.

Note that it is not necessary to report this consumption as a separate line item. This consumption should be included in the relevant fuel sub-total, e.g. Gasoil, Road Diesel etc.

3.15 Should we include fuel/energy used for maintenance projects?

Yes.

3.16 Should we include fuel/energy used for capital projects?

The fuel/energy consumed directly in the construction of capital projects is not included in your baseline calculation, nor is it included in the calculation of your organisation's progress towards the 33% target. Therefore, it is not currently reportable through the M&R system. SEAI is currently considering how to track the energy consumed in the construction of future capital projects.

The fuel/energy used in the operation and maintenance of capital projects is reportable and must be included. This consumption is included in your baseline calculation and in the calculation of your organisation's progress towards the 33% target.

3.17 We supply fuel to other organisations. How should we account for this?

If your organisation purchases fuel and then sells it to other organisation(s) (public or private) for consumption by other organisation(s), then this fuel should not be counted when collating your consumption.

3.18 Our organisation has offices outside the State. Should the energy consumption in these offices be included?

Yes. The energy consumed in the international offices of Irish public bodies located in other jurisdictions should be reported.

3.19 Is the energy consumption of data centres included?

Yes. You should report the consumption of data centres in exactly the same manner as you would for any other energy consuming facility or building. There may be some important considerations relating to the three *separate matters* of location, attributable usage and ownership:

- Physical location: the physical location of a data centre is largely irrelevant in the M&R context, i.e. in the same way that your organisation could have two buildings in two different counties, it could have a data centre that is remote from its other energy users.
- Attributable usage: if your organisation shares a data centre, (i.e. it only 'uses' a portion of a data centre), then the consumption attributable to your organisation should be calculated in a similar manner to that for a shared building - see relevant FAQs {FAQ 5.6 & FAQ 5.7}. Note that this consideration is independent of the ownership of the data centre (see below).
- Ownership: even if the data centre is owned / operated by a third party, the attributable consumption is reportable by your organisation. The principle that the public sector cannot reduce its energy consumption – or circumvent part of its energy efficiency obligations – by outsourcing or subcontracting activities applies {FAQ 3.4}.

The FAQ outlining the approach to shared services {FAQ 3.5} may also be relevant.

3.20 Is the fuel consumed in power stations included?

In general, no, unless the generation facility is located within the meter boundary of a public body's energy consuming facility, e.g. within a campus, building, WWTP, etc. However, there are some exceptions. The following summarises the treatment of different power generation facilities:

- The fuel consumed *directly* in power stations and in the *direct* transportation of fuels to power stations is not included. From a national statistics perspective this energy use is 'counted' as *energy transformation input* rather than *final energy consumption*. It is not reportable through the M&R system.
- The overhead energy consumption of any public body – or public body business unit(s) – that operates a power station is included and is reportable through the M&R system.
- Smaller power generation facilities that are owned or operated by public bodies and which *are not located within* the meter boundary of public bodies' own energy consuming facilities (e.g. buildings, campuses, WWTPs, etc.) *are treated in the same manner as power stations*, i.e. they are *not included* in M&R. This applies for all technologies, including fossil-fired generation, fuel-based renewable generators (e.g. biomass), CHP and non-fuel-based renewable generators such as wind, hydro, solar PV etc. *The only exception to this is landfill gas plants (see below).*
- Power generation facilities that are owned or operated by public bodies and which *are located within* the meter boundary of public bodies' own energy consuming facilities (e.g. buildings, campuses, WWTPs, etc.) *are included* in M&R. This applies for all technologies, including fossil-fired generation, fuel-based renewable generators (e.g. biomass), CHP and non-fuel-based renewable generators such as wind, hydro, solar PV etc. Different systems/technologies are treated differently. The general principle is that the input fuel consumption (only) is counted for fuel consuming systems and the generation output (only) is counted for non fuel consuming systems. Landfill gas is a notable exception to this principle. *Search the FAQ with relevant keywords to find guidance for specific technologies/cases.*
- The electrical output from landfill gas generation plants is included and is reportable through M&R, even where such facilities are located outside the meter boundary of public bodies energy consuming facilities.

3.21 Our organisation owns/operates wind turbine(s). Are these included?

It depends on where the wind turbine(s) is/are located:

- Wind turbines or wind farms that are owned or operated by public bodies and which *are not located within* the meter boundary of one of the public body's own energy consuming facilities (e.g. a building, campus, WWTP, etc.) *are treated in the same manner as power stations*, i.e. they are *not included* in M&R. From a national statistics perspective this energy is 'counted' as *energy transformation input* rather than *final energy consumption*. It is not reportable through the M&R system.

- Wind turbines that are owned or operated by public bodies and which *are located within* the meter boundary of one of the public body's own energy consuming facilities (e.g. a building, campus, WWTP, etc.) *are included* in M&R. The generation output from these systems is reportable through M&R – as 'Electricity – Onsite Generation by Non-fuel Renewables or Landfill Gas' {FAQ 9.7}. The M&R treatment of these energy streams will typically result in a primary energy saving for the public body - because a primary energy conversion factor {FAQ 13.8} of 1.0 is used for the onsite generation.

3.22 Our organisation owns/operates hydro electricity plant(s). Are these included?

It depends on where the hydro plant(s) is/are located:

- Hydro plants that are owned or operated by public bodies and which *are not located within* the meter boundary of one of the public body's own energy consuming facilities (e.g. a campus, WWTP, etc.) *are treated in the same manner as power stations*, i.e. they are *not included* in M&R. From a national statistics perspective this energy is 'counted' as *energy transformation input* rather than *final energy consumption*. It is not reportable through the M&R system.
- Hydro plants that are owned or operated by public bodies and which *are located within* the meter boundary of one of the public body's own energy consuming facilities (e.g. a campus, WWTP, etc.) *are included* in M&R. The generation output from these systems is reportable through M&R – as 'Electricity – Onsite Generation by Non-fuel Renewables or Landfill Gas' {FAQ 9.7}. The M&R treatment of these energy streams will typically result in a primary energy saving for the public body - because a primary energy conversion factor {FAQ 13.8} of 1.0 is used for the onsite generation.

3.23 Our organisation owns/operates landfill gas generation plant(s). Are these included?

Yes. The electrical output from landfill gas generation plants is included and is reportable through M&R – as 'Electricity - Onsite Generation by Non-fuel Renewables or Landfill Gas' {FAQ 9.8}. This applies to plants located inside or outside the meter boundary of public bodies energy consuming facilities.

The M&R treatment of the plant output will typically result in a primary energy saving for the public body – because a primary energy conversion factor {FAQ 13.8} of 1.0 is used for the generation.

3.24 Some of our waste is treated in an offsite waste to energy facility. Is this included?

No. Energy recovery from waste streams processed in offsite waste-to-energy facilities is not included and is not reportable through the M&R system.

3.25 Is the fuel consumed in the operation of the natural gas network included?

No. The energy consumed *directly* in the operation of the natural gas network (e.g. compressor stations, AGIs) is not included. From a national statistics perspective this energy use is ‘counted’ as *energy transformation input* rather than *final energy consumption*. It is not reportable through the M&R system.

However, the overhead energy consumption of any organisation – or business unit(s) – that undertakes this activity should be included and is reportable through the M&R system.

3.26 Is the fuel consumed for peat harvesting and briquette manufacture included?

No. Neither the fuel consumed *directly* by peat harvesting equipment / vehicles nor the fuel consumed *directly* by briquette manufacturing processes are included. From a national statistics perspective this energy use is ‘counted’ as *energy transformation input* rather than *final energy consumption*. It is not reportable through the M&R system.

However, the overhead energy consumption of any organisation – or business unit(s) – that undertakes these activities should be included and is reportable through the M&R system.

3.27 One of our facilities is in the EU Emissions Trading Scheme (ETS) – is this consumption included?

Yes. The fact that a site is in the EU ETS is not in itself sufficient to exclude it from inclusion in M&R. In practice, however, the vast majority of public sector EU ETS sites are not within the scope of M&R because they are power stations {FAQ 3.20}.

3.28 Our organisation already reports data through SEAI’s Large Industry Energy Network (LIEN). Do we have to report this data separately through M&R?

Yes.

If some or all of your organisation’s consumption comes within the scope of M&R, then you should report the consumption through M&R even if it is also reported through LIEN. The LIEN data is not shared internally by SEAI with the M&R system.

SEAI takes measures to ensure that consumption and/or savings data reported through both systems are not ‘double counted’ at sectoral or national levels.

4 LOCAL AUTHORITIES

4.1 Is local authority housing included?

No. Neither local authority housing nor housing subsidised by public bodies are included in the target calculations. However, credit for energy efficiency actions in housing owned and rented out by local authorities will be recorded elsewhere within the framework of the NEEAP. But it does not form part of the 33% savings target set for public bodies within the NEEAP.

Therefore, local authorities do not have to report on the consumption attributable to these end users.

4.2 Our local authority's water services assets transferred to Irish Water in 2014 – how will the system account for this?

The following is a summary of this lengthy FAQ:

1. Water services are not within the scope of local authorities' reportable consumption from 2014 onwards.
2. Local authorities should include water services consumption in their pre-2014 data and exclude it from their data for the years from 2014 onwards. Detailed guidance is provided below in 'local authorities: reporting data relating to water services'.
3. SEAI implemented methodological changes to the M&R system to accommodate the transition of water services assets to Irish Water in three phases. Local authorities' targets remain at 33% and the savings made while water services were within their scope (i.e. up to 2013) are 'locked in'. Detailed descriptions of the methodological approach and the history of implementation steps are provided in 'Detailed methodology' and 'Timeline of M&R system changes' below.
4. SEAI supported local authorities during the summer of 2017 to make final adjustments to their water services transition data (most of which relates to 2013) and to choose robust activity metrics.

Local authorities: reporting data relating to water services

Local authorities should adopt the following approach with respect to reporting data related to water services assets that transferred to Irish Water:

1. **MPRNs & GPRNs:** follow the three 'golden rules' for reporting MPRNs and GPRNs that transferred to Irish Water: (1) leave them in the system; (2) ensure that they are assigned one of the 'IW' consumption categories; and (3) classify them as 'not validated' for all years from 2014 onwards (only). These three rules are described in detail in this FAQ {FAQ 4.3}.
2. **Other thermal or transport fuel accounts transferred to Irish Water:** do not report these amounts for any years from 2014 onwards. Do not change amounts reported for 2013 or earlier, i.e. this consumption should be included for the years up to and including 2013. To facilitate the accurate calculation of your local authority's energy performance up to the transition to Irish Water, you can optionally specify the amount of non-networked energy consumption (i.e. non MPRN or GPRN consumption) that was used by your local authority in

2013 and was included within your 2013 consumption figures and was attributable to assets that subsequently transferred to Irish Water. Guidance is provided in this FAQ {FAQ 4.4}.

3. **Water services consumption operated & managed by local authorities (e.g. local authority fleets or buildings that are partially used for water services):** the default approach is for local authorities to continue to report this consumption. As an alternative approach, if local authorities can identify and quantify this consumption and have agreement from Irish Water to do so, they can provide this information to Irish Water for inclusion in the latter's report. For simplicity, SEAI recommends the use of the default approach. No matter whether a local authority chooses the default or alternative approach, you should not change the amounts reported for these consumers for 2013 or earlier. It is also important that local authorities adopt a consistent approach to the reporting of this data for every year from 2014 onwards.
4. **Activity metrics:** local authorities can use one activity metric for the period up to and including 2013, and a completely different one from 2014 onwards. Additional guidance on the use of multiple activity metrics is available from this FAQ {FAQ 4.5}.

Irish Water: reporting data from 2014 onwards

The energy consumption of the water services assets that transferred to Irish Water is part of Irish Water's scope of reportable consumption from 2014 onwards, i.e. Irish Water is required to report energy consumption and related data for water services assets from the 2014 reporting cycle onwards. Local authorities should cooperate with Irish Water regarding the provision of relevant data.

The energy efficiency target for the water services assets is 33%. Irish Water's target is 33%, less the progress made by the sector up to and including 2013.

Detailed methodology

From an M&R perspective, local authorities have been considered to operate without water services since January 2014. The progress of local authorities in the period from their baseline to the end of 2013 has been 'locked in' and their percentage distance to the 2020 target (as of 2013) has been applied to an adjusted 2020 EnPI target for each authority. 2013 is therefore an important transition year in the underlying calculations for tracking each local authority's energy performance before and after the transfer of assets. The energy saving as of the end of 2013 is a particularly important value used in the calculations and it remains unchanged despite adjustments to consumption, activity metrics and EnPIs.

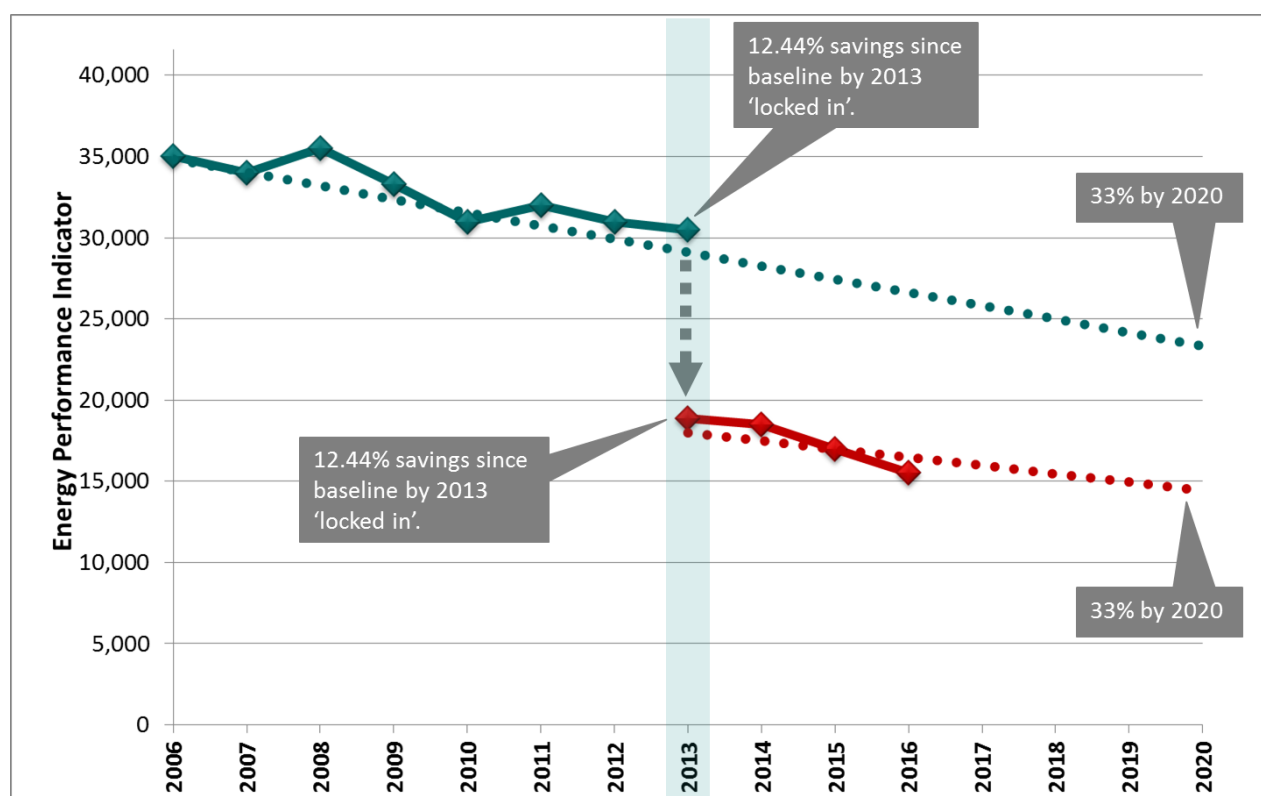
The M&R system recalculates each local authority's 2013 energy consumption (TPER) on the basis of no water services consumption. This is referred to as the 'adjusted TPER'. This is calculated by subtracting the following consumption from the 2013 TPER:

- 2013 attributable consumption for MPRNs and GPRNs classified with one of the 'IW-' consumption categories. See this FAQ {FAQ 4.3} for additional information.
- 2013 consumption of other thermal or transport fuels reported by the local authority as having been used by the local authority in 2013 and included within the authority's 2013 consumption figures and attributable to assets that subsequently transferred to Irish Water. Note that the general effect of reporting such consumption data is to decrease the local authority's 2020 target EnPI in absolute terms and to decrease its gap to target in absolute

terms (if all other inputs remain unchanged). See this FAQ {FAQ 4.4} for additional information.

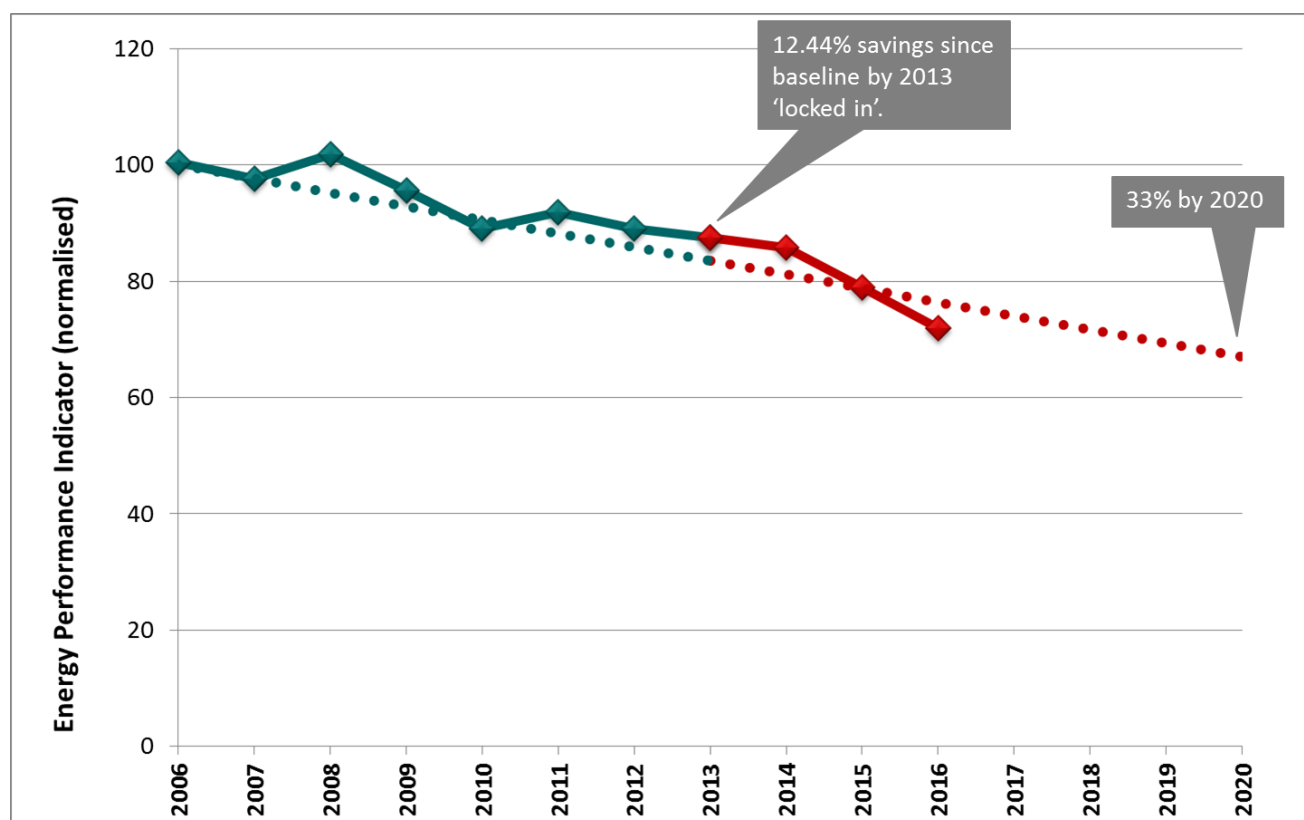
In addition, in recognition of the structural change to the activities that underpin local authority energy use, local authorities can use one activity metric for the period up to and including 2013, and a completely different one from 2014 onwards. This enables local authorities to track their energy performance on a robust basis from their baseline, through the transition to Irish Water and up to 2020. To facilitate the transition, local authorities must report values for both metrics for 2013 (see this FAQ {FAQ 4.5} for additional information).

The system uses the adjusted TPER and the two alternative activity metric values to generate two EnPI values for 2013 and applies the pre-adjustment percentage distance-to-target to determine a new target EnPI (for 2020). This is illustrated in the example below.



In this fictional example, the dark green lines represent the local authority's past performance (solid) and glidepath (dotted) before the transition of water services assets to Irish Water. The local authority had saved 12.44% since its baseline (by 2013). The red diamond for 2013 represents the effect of removing water services consumption from the local authority's 2013 performance. Note, however, that the percentage savings (12.44%) remains the same, as does the pre-adjustment % distance-to-target. The latter is used to determine a new target EnPI.

In order to facilitate the use of two alternative activity metrics over the period from baseline to 2020, the trend in a local authority's EnPI is now always displayed as a normalised EnPI {FAQ 13.11} (see illustration below), rather than as a non-normalised EnPI (as had been used previously and as shown above). Note that both images (above and below) illustrate the same performance over time for the same fictional example.



Timeline of M&R system changes

SEAI examined several options for the tracking of the energy performance of water services before and after the transition to Irish Water. A shortlist of three options was discussed with local authorities in early 2015. Following subsequent analysis and taking account of feedback from stakeholders, SEAI developed a preferred option and presented this to local authorities at a follow-up consultation event in Athlone on 16 April 2015 (see discussion paper on [Energy Link](#)).

The system was subsequently updated in three phases (one in 2015 and two in 2017) to accommodate these methodological changes.

Phase I was implemented during and immediately after the 2014 reporting cycle. The objective of phase I was to calculate an adjusted 2013 EnPI for each local authority (based on its actual 2013 consumption not including its 2013 water services consumption) and an adjusted target EnPI for 2020. The objective was that this adjusted EnPI and target should be *substantially, but not necessarily completely*, correct. The specific actions in phase I were as follows:

1. SEAI analysed the 2013 performance for all local authorities to determine the distance-to-target for each local authority, as of 2013. The data analysed was that in the M&R system as of 4 September 2015, which was the deadline after completion of the data verification assessment (DVA) exercise for the 2014 reporting cycle. This task required no action from local authorities.
2. SEAI quantified the 2013 water services electricity consumption for each local authority by summing the attributable consumption through validated MPRNs that were classified as either 'wastewater treatment' or 'pumping / water treatment' for 2013. Again, the data analysed was that from the end of the 2014 reporting cycle. This task required no action from local authorities.

3. SEAI quantified the 2013 water services natural gas consumption for each local authority by summing the attributable consumption through validated GPRNs that were classified as either 'wastewater treatment' or 'pumping / water treatment' for 2013. Again, the data analysed was that from the end of the 2014 reporting cycle. This task required no action from local authorities.
4. Local authorities were invited to optionally submit an email to SEAI with any 2013 water services consumption data that was not captured through the water services MPRNs and GPRNs referenced in steps 2 & 3 above, e.g. consumption figure for any self-reported electricity attributable to water services. This optional step was available to the local authorities up to the deadline for the 2014 reporting cycle (29 May 2015).
5. Local authorities reported for 2014 in the normal manner and in accordance with the guidance issued above.
6. In Q3 2015, SEAI calculated an interim 2013 water services primary energy consumption (TPER) for each local authority (based on 2, 3 & 4 above) and deducted this amount from each local authority's actual 2013 TPER (as per the end of the 2014 reporting cycle) to calculate an interim adjusted 2013 TPER figure for each local authority. This task required no action from local authorities.
7. SEAI then divided the interim adjusted 2013 TPER figure for each local authority by 2013 organisation level activity metric (as per the end of the 2014 reporting cycle) to calculate an interim adjusted 2013 EnPI figure for each local authority. This task required no action from local authorities.
8. SEAI calculated an interim adjusted target EnPI (for 2020) for each local authority. The savings up to 2013 were 'locked in' and the pre-adjustment 2013 distance-to-target (%) (identified by SEAI in step 1) was applied to the interim adjusted 2013 EnPI to determine the interim adjusted target EnPI. This task required no action from local authorities.
9. SEAI uploaded the adjusted 2013 data to the updated M&R system in Q4 2015. This provided local authorities with a scorecard showing performance during the period from the baseline to 2013 (unadjusted, i.e. including water services) and performance over the period from 2013 (adjusted, i.e. not including water services) onwards. Each local authority's target was adjusted, such that its savings up to 2013 were locked in and the 2013 distance-to-target as a percentage (identified by SEAI in step 1) was applied to the interim adjusted EnPI. This task required no action from local authorities, although local authorities were encouraged to log in and review their performance.
10. In late 2015 SEAI published its report on public sector energy consumption, in which the transition of water services assets to Irish Water was (briefly) explained. The performance data published for individual local authorities was based on the 'locked in' savings achieved up to 2013 (including water services) and the savings achieved from 2013 onwards (without water services). Local authority performance data was highlighted as being subject to refinement upon completion of phase II.

The 2015 reporting cycle commenced in late 2015. Local authorities reported their data in the normal manner and in accordance with the guidance issued above. SEAI used the same 'locked-in' energy savings (as per steps 6-8 above) and published its annual report in late 2016. The performance data published for individual local authorities was again based on the 'locked-in' savings achieved up to 2013 (including water services) and the savings achieved from 2013 onwards (without water services). Local authority performance data was highlighted as being subject to refinement upon completion of phase II.

Phase II of the software changes was implemented in May 2017. The specific elements in phase II were as follows:

11. Additional functionality was provided to enable local authorities to classify water services MPRNs and GPRNs as having transferred to Irish Water. Note that as part of this change, SEAI changed the classification of all local authority 'Pumping / Water Treatment' MPRNs and GPRNs to 'IW – Pumping / Water Treatment', and changed the classification of all those labelled 'Wastewater Treatment' to 'IW – Wastewater Treatment'. SEAI did this because the vast majority of such MPRNs and GPRNs transferred to Irish Water.
12. Additional functionality was provided to enable local authorities to specify amounts of non-networked energy consumption that was used in 2013 by assets that subsequently transferred to Irish Water.
13. Additional functionality was provided to enable local authorities to use different activity metrics for the periods up to and including 2013 and from 2014 onwards.

Phase III of the software changes was implemented in 14 July 2017. The specific elements in phase III were as follows:

14. The main graph in 'Your Scorecard' was changed to show the normalised EnPI {FAQ 13.11}, rather than the non-normalised version that had been used previously. This facilitates the transition from one activity metric to another. Other instances of the non-normalised EnPI graph in the system were also updated to show the normalised version.
15. The 'Detailed Energy Data Report' was updated to show the pre-and-post adjustment 2013 EnPI values and the alternative activity metrics, etc.

The implementation of phase II provided an opportunity for local authorities to make final adjustments to their 2013 data, which in turn automatically carry forward into their adjusted 2013 EnPI figure, their distance-to-target figures for subsequent years and their adjusted target EnPIs. SEAI provided support to local authorities to do this during the 2017 reporting cycle.

There are also comprehensive FAQs available on:

- Reporting MPRNs and GPRNs for assets that transferred to Irish Water {FAQ 4.3}.
- Reporting non-networked consumption for assets that transferred to Irish Water {FAQ 4.4}.
- Using different activity metrics for the periods before and after the transition to Irish Water {FAQ 4.5}.

4.3 How should our local authority report and validate MPRNs and GPRNs that transferred to Irish Water?

There are three important rules for reporting MPRNs and GPRNs that transferred to Irish Water:

(1) Leave MPRNs & GPRNs in the system

MPRNs and GPRNs that transferred to Irish Water must be left in the M&R system, i.e. do not delete them. The only exception to this is if an MPRN or GPRN was never within the scope of your local authority's reportable consumption, including for the entire period from the start of your baseline up to the transition to Irish Water.

(2) Assign them one of the 'IW' consumption categories

The changes described in this section as having been 'made by SEAI' will be undertaken in early May 2017. You will only be able to undertake the action described in this section from 23 May 2017 onwards.

You should ensure that one of the three consumption categories that begin with 'IW' is used for such MPRNs and GPRNs, i.e. one of 'IW Pumping / Water Treatment', 'IW Wastewater Treatment' or 'IW Other'.

Note that as part of the phase II changes to the M&R system to accommodate the transition to Irish Water, SEAI changed the classification of all local authority 'Pumping / Water Treatment' MPRNs and GPRNs to 'IW Pumping / Water Treatment', and changed the classification of all those labelled 'Wastewater Treatment' to 'IW Wastewater Treatment'. SEAI did this because the vast majority of such MPRNs and GPRNs transferred to Irish Water. So, you should not have to take any action for the vast majority of your MPRNs or GPRNs. If one or more of your local authority's MPRNs or GPRNs did not transfer, then you should change the classification back.

If your local authority has an MPRN or GPRN that was not previously classified as 'Pumping / Water Treatment' or 'Wastewater Treatment' and it did transfer to Irish Water, then you should classify it with one of the three 'IW' categories.

(3) Classify them as 'not validated' for all years from 2014 onwards

You should classify these MPRNs and GPRNs as 'not validated' for all years from 2014 onwards.

But, you should not change the validation status for any years up to and including 2013, i.e. these meters were part of your local authority's consumption up to the end of 2013, so they should be validated for this period.

It is important that these three rules are followed correctly because doing so ensures that your local authority's performance is correctly calculated.

There are also comprehensive FAQs available on:

- The changes that were made to the M&R methodologies to account for the transition of local authority water services assets to Irish Water {FAQ 4.2}.
- Validating MPRNs and GPRNs {FAQ 18.5}.
- Reporting non-networked consumption for assets that transferred to Irish Water {FAQ 4.4}.
- Using different activity metrics for the periods before and after the transition to Irish Water {FAQ 4.5}.

4.4 How should our local authority report oil, diesel and other non-networked energy consumption that transferred to Irish Water?

The approach that local authorities should adopt for reporting non-networked consumption (i.e. consumption other than that derived through MPRN or GPRN records) that transferred to Irish Water is set out below for different consumption periods.

Consumption from baseline to 2012

You should report the consumption in the normal manner, as part of your local authority's overall consumption. There is no need to split out this consumption in any way, e.g. as being attributable to water services, etc.

2013 consumption

You should report the consumption in the normal manner, as part of your local authority's overall consumption.

You will only be able to undertake the action described in the remainder of this section from 23 May 2017 onwards.

To facilitate the accurate calculation of your local authority's energy performance up to the transition to Irish Water, you can specify the amount of non-networked energy consumption that:

- Was consumed by your local authority in 2013; and
- Was included within your 2013 consumption figures; and
- Was attributable to assets that subsequently transferred to Irish Water, i.e. the corresponding consumption for 2014, 2015, 2016, etc. is not included in the your local authority's data.

You can do this by clicking the 'Allocate other 2013 consumption to water services' feature on '3 Energy Usage' tile in 'Your 20XX Report' and then by entering the relevant quantities in the column labelled '2013 Water Services Consumption'. Note that only consumption that meets all three of the above criteria should be reported in this manner. Examples of such consumption could include:

- A portion of your 2013 transport consumption that was used by part of your fleet in 2013 for water services activities. The equivalent consumption transferred to Irish Water in 2014.
- A portion of your 2013 heating oil consumption that was used in an office building (or part of a building) in 2013. The function that operated from the office building (or part thereof) was a water services function that transferred to Irish Water in 2014.

It may be the case that the amount of non-networked consumption attributable to water services in 2013 was negligible or that it is not possible to disaggregate such consumption from your overall consumption. In these circumstances, the relevant fields can be left blank (zero).

2014 onwards

You should not report consumption for assets that transferred to Irish Water for any years from 2014 onwards.

There are also comprehensive FAQs available on:

- The changes that were made to the M&R methodologies to account for the transition of local authority water services assets to Irish Water {FAQ 4.2}.
- Reporting MPRNs and GPRNs for assets that transferred to Irish Water {FAQ 4.4}.
- Using different activity metrics for the periods before and after the transition to Irish Water {FAQ 4.5}.

4.5 How can our local authority use different activity metrics for the periods before and after the transition to Irish Water?

A good activity metric {FAQ 12.10} should account for the activities that directly influence energy consumption. For local authorities, the transition of water services assets to Irish Water resulted in a significant change to the activities that influence their energy consumption.

Water services accounted for over 30% of local authority energy consumption prior to the transition to Irish Water. While the actual proportion varied from county to county, the provision of water services was a very significant driver of local authority energy consumption up to the end of 2013. Since the beginning of 2014, the provision of water services no longer materially affects local authority energy consumption.

In recognition of this structural change to the activities that underpin local authority energy use, SEAI adapted the M&R methodologies to enable local authorities to use one activity metric for the period up to and including 2013, and a completely different one from 2014 onwards. This enables local authorities to track their energy performance on a robust basis from their baseline, through the transition to Irish Water and up to 2020.

Either or both metrics can be composite metrics.

What are the two periods covered by the separate activity metrics?

The first metric applies from the start of your baseline up to the end of 2013. The second applies from the start of 2014 onwards. This coincides with the transition to Irish Water. You cannot specify a different break-point or transition year for the two metrics.

To facilitate the transition from one metric to the other, you must report data for both metrics for 2013.

Under what circumstances should we use separate metrics?

Your local authority can choose to use one or two metrics for the two periods. However, your local authority *should* use separate metrics for the two periods if either of the following applies:

- You currently use a metric (including a composite metric) for the period since your baseline (to date) that explicitly incorporates water services activity, e.g. if your composite metric incorporates a sub-activity directly related to water services.

- You currently use a metric (including a composite metric) for the period since your baseline (to date) that explicitly incorporates other activities undertaken by your local authority, but not water services, e.g. if your composite metric incorporates sub-activities for public lighting and/or buildings, but not water services.

Separate metrics are not required if you use population served as your metric, although you may still opt to use separate metrics.

Appropriateness of different metrics

If you are using separate activity metrics for the two periods:

- The 'pre-2014' metric must reflect the fact that your local authority provided water services during this period. The provision of water services need not be explicitly included for this period (e.g. population served is acceptable), but it cannot be explicitly excluded (e.g. a metric based on public lighting and floor area alone is unlikely to be appropriate).
- The '2014 onwards' metric must not be based on water services activities.

Population served is an acceptable metric for either or both periods, but it may not be optimum for all local authorities.

How do we report using two metrics?

If you wish to use two separate metrics for the two periods, you should click 'Change the basis for your activity metric from 2014 onwards' on tile 2, and follow the instructions for setting up your new metric for this period. The system uses your existing metric for the period up to and including 2013.

Note that to facilitate the transition from one metric to the other, you must report data for both metrics for 2013. So, you must report data for:

- Your 'pre-2014' activity metric for every year from the start of your baseline up to 2013 (inclusive).
- Your '2014 onwards' activity metric for every year from 2013 onwards.

Note that the system allows you to report values for all metrics for all years. However, it is the values up to and including 2013 only that are used for the 'pre-2014' metric and the values entered from 2013 onwards that are used for the '2014 onwards' metric. It is this combination of values only that is used to calculate your energy performance.

If you do not want to report values from 2014 onwards for the 'pre-2014' metric or values for the period prior to 2013 for the '2014 onwards' metric, then enter zero in the relevant fields.

How is our energy performance calculated and shown using two metrics?

Your local authority's energy performance is calculated using the first metric for the period up to and including 2013. Your 2013 EnPI (based on the first metric) is set to an equivalent EnPI value based on your second metric for 2013. This is why the system needs values for both metrics for 2013. Both EnPIs represent exactly the same percentage saving since baseline. Your local authority's energy performance for the period from 2014 onwards is then calculated using the second metric.

To facilitate plotting your performance on the scorecard, the main EnPI and glidepath graphic in the system has been modified to show a normalised EnPI {FAQ 13.11}. This will not show a discontinuity at 2013 or 2014 when the water services consumption was removed. Any increases or decreases shown on the scorecard graph through the transition period are entirely attributable to your local authority's energy performance.

There are also comprehensive FAQs available on:

- The changes that were made to the M&R methodologies to account for the transition of local authority water services assets to Irish Water {FAQ 4.2}.
- Reporting MPRNs and GPRNs for assets that transferred to Irish Water {FAQ 4.3}.
- Reporting non-networked consumption for assets that transferred to Irish Water {FAQ 4.4}.
- Using different activity metrics for the periods before and after the transition to Irish Water {FAQ 4.5}.

4.6 Our local authority merged with another local authority in 2014 – how should we account for this?

Some local authorities merged during 2014.

It is necessary to merge the two local authorities on the system. The timing of the merge on the system is dependent on the timing of the actual merge and is, *to a certain extent*, at the discretion of the local authorities.

The current guidance is that the merged public body should first report merged data for the year in which the merge occurs, even if the merge occurs at some point during that year. For example, if local authorities A and B merged in June 2015, they would report separately for the 2014 reporting cycle (data up to 31 December 2014) and report as a single merged entity in January 2016 with combined data for the year ending 31 December 2015. If the local authorities had a strong preference for doing so, they could defer the M&R merge until the subsequent reporting cycle (January 2017), so that their first merged submission would be with data for the year ending 31 December 2016.

Either way, the procedure for merging organisations as set out in FAQ 13.24 will be applied and the historical data up to the time of the merge will be combined to develop a new baseline for the merged organisation.

4.7 Our local authority owns a leisure centre that is operated under contract by a private company. Is this facility's energy consumption within the scope of our organisation's consumption?

Yes. If the facility is being run on behalf of your organisation, then its consumption should be included in your reported consumption.

4.8 Do local enterprise offices have to report?

Local authorities should include the consumption of relevant local enterprise offices in their reports. Local authorities' historical data should include the consumption of relevant county and city enterprise boards.

4.9 Is public lighting included?

Yes. If your organisation provides public lighting, then this electricity consumption is included in the scope of your reportable energy consumption. This can be reported by submitting the relevant MPRNs and GMPRNs.

The energy consumption for public lighting on national routes that is paid for by the relevant local authority but then reimbursed by Transport Infrastructure Ireland (TII, formerly the National Roads Authority (NRA)) is within the scope of the local authority's reportable consumption, i.e. it should be reported by the relevant local authority and not by TII.

4.10 Are waste management services included in a local authority's scope?

The energy consumed in the provision of waste management services (e.g. collection, processing etc.) should be included in a local authority's consumption in both of the following cases:

- The local authority provides the services directly;
- The local authority has a contractual relationship with one or more private contractor(s) to provide the services to third parties (e.g. to domestic and commercial customers in the local authority's jurisdiction).

In the latter case, the consumption of the private contractors should be included in the data reported by the local authority. In future, local authorities should ensure that the provision of energy data by private contractors to local authorities is a contractual requirement.

5 LANDLORD & TENANT

5.1 What do we submit if we lease a facility from a landlord and we pay the bills?

If your organisation pays the bills, then you should include the relevant information with your submission (e.g. MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} for network-connected energy, consumption data for non-network-connected).

If the consumption corresponding with the bills is shared with the landlord or another tenant, then see FAQ 5.7.

5.2 What do we submit if we lease a facility from a landlord and the landlord pay the bills?

Even though your organisation does not pay an energy supplier directly, the organisation still consumes energy and, therefore, has an obligation to report under the legislation.

In these circumstances you should request your landlord to give you access to as much relevant data as possible for the building (e.g. bills, meter readings, MPRNs, GPRNs, consumption data etc.) and work together to estimate the consumption attributable to your organisation.

If the consumption corresponding with the bills is shared with the landlord or another tenant, then see FAQ 5.7.

5.3 What if our landlord refuses to share information with us?

You should explain to your landlord that, as a public body, your organisation is obliged to report on your energy consumption annually in accordance with S.I. 426 of 2014 and that this consumption includes *inter alia* the energy consumption attributable to your organisation in buildings which your organisation leases. This includes energy consumption for which your public body does not directly pay an energy supplier, e.g. consumption for which you pay as part of a rental payment to a landlord. Your organisation must report on the consumption in the billed units of energy delivery (i.e. kWh, litres, tonnes etc.) and not in Euro.

To facilitate good energy management practices in the longer run, you could consider the installation of sub-meters on your organisation's share of the energy supplies.

5.4 What if our organisation leases the building to tenant(s) and the tenant pay the bill?

If the tenant comes under the aegis of your organisation and if your organisation is reporting on its behalf (see FAQ 6.1), then you must include the corresponding data (MPRNs, GPRNs, consumption data, activity data etc.) with your submission. You must identify the organisation(s) for which you are reporting in your submission.

If the tenant comes under the aegis of your organisation and the tenant organisation is reporting separately from yours, then you do not have to submit any data. The tenant organisation must submit the data (MPRNs, GPRNs, consumption data, activity data etc.) to SEAI.

If the tenant does not come under the aegis of your organisation, then you do not have to submit data *as long as the consumption does not come within the scope of your organisation's reportable consumption* – see the FAQ relating to the outsourcing or subcontracting activities {FAQ 3.4}. In all of these cases, if the consumption corresponding with the bills is partly attributable to your organisation, then see FAQ 5.7.

5.5 What if our organisation leases the building to tenant(s) and we pay the bill?

If the tenants come under the aegis of your organisation and if your organisation is reporting on its behalf (see FAQ 6.1), then you must include the corresponding data (MPRNs, GPRNs, consumption data, activity data etc.) with your submission. You must identify the organisations for which you are reporting in your submission.

If the tenant comes under the aegis of your organisation and if the tenant organisation is reporting separately from yours, then you should make the relevant information (MPRNs, GPRNs, consumption data) available to the tenant for submission. The tenant organisation should then submit the data to SEAI.

If the tenant does not come under the aegis of your organisation, then you do not have to submit data for this consumption *as long as the consumption does not come within the scope of your organisation's reportable consumption* – see the FAQ relating to the outsourcing or subcontracting activities {FAQ 3.4}.

In all of these cases, if the consumption corresponding with the bills is partly attributable to your organisation, then see FAQ 5.7.

5.6 What do we do if we share a non-network energy supply with another organisation?

If your organisation shares a facility (e.g. building) with other organisation(s), it may share one or more non-network connected energy supplies (e.g. gasoil tank, LPG tank, biomass) with those organisation(s).

If your organisation shares one of these energy supplies, then you should estimate the percentage of the consumption that is attributable to your organisation and include that amount in the relevant energy subtotal that you self report in your annual submission. For example, if you share a gasoil tank for heating a building, you should estimate the portion of the total annual billed quantity (in litres) that your organisation pays for – and add this amount to your organisation's gasoil total. The estimation could be done on the basis of your organisation's share of the floor area served by the boiler(s)/oil tank or by the ratio of staff or activity in the area served by the gasoil supply.

5.7 What do we do if we share an electricity or natural gas supply (meter/bill) with another organisation?

If your organisation shares a facility (e.g. building) with other organisation(s), it may share one an electricity (MPRN) and/or natural gas (GPRN) supply with those organisation(s).

If your organisation shares an MPRN (or GPRN), then you should report the MPRN (or GPRN) in the usual manner and estimate the percentage of the electricity (or gas) consumption through the meter that is attributable to your organisation. Simply put, you should estimate the portion of that MPRN's (GPRN's) bill that your organisation consumes. This could be done on the basis of your organisation's share of the floor area served by the meter or by the ratio of staff or activity in the area served by the meter.

6 SUB-ORGANISATIONS: WHO REPORTS?

6.1 Our organisation has organisation(s) that come under our aegis. Should they report separately or should we report on their behalf?

If one organisation comes under the aegis of another and the 'child' organisation's energy consumption is consumption that should be reported in accordance with the definition of the scope of the public sector, then the key requirement is that this energy consumption is reported.

There is some flexibility over which organisation reports it:

- The onus is on 'parent' organisations to ensure that the energy consumption of organisations that come under their aegis is reported to SEAI.
- Energy consumption data should be reported by the organisation that consumes it (subject to the exceptions set out below).
- In the exceptional cases set out below, 'parent' organisations must report on behalf of their 'child' organisations. However, they do not need to give a breakdown of the 'child' organisation's contribution to the overall consumption, i.e. the energy performance of the organisation 'family' is evaluated in aggregate. In these circumstances it is important that:
 - The 'parent' organisation clearly identifies the child organisation(s) for which it is reporting.
 - The 'parent' organisation reports *all* of the data for the child organisation(s)
 - The 'child' organisation does not report separately.
- Organisations can request that specific 'child' organisations (other than those that fall into the exceptional categories below) be included in the 'parent' organisation's submissions. Such requests will be evaluated on a case by case basis by SEAI. Organisation 'families' should decide at the outset how they will approach reporting and should set their baselines {FAQ 13.12} accordingly, as splitting out organisations once baselines have been established will require the re-establishment of baselines and is not encouraged.
- SEAI reserves the right to request 'parent' organisations to report on a disaggregated basis, i.e. to request that 'child' organisations report separately.

The following organisations should report through their 'parent' public bodies:

- Town / borough councils – historical data should be included via relevant county / city councils;
- Publicly-owned nursing homes;
- Public private partnerships (PPPs);
- Local enterprise offices - via the local authorities;
- Schools that come under the aegis of education & training boards (ETBs) – each ETB should report on behalf of its constituent schools.

6.2 Should the historical consumption of town / borough councils be reported through relevant county (city) councils?

Yes. The historical energy consumption of town / borough councils should be reported by the parent county (or city) council. There is no need for the county council to explicitly quantify the town / borough council's consumption, i.e. it suffices to include it in the county (or city) council's total.

7 ENERGY REPORTING OVERVIEW

7.1 How often do we have to report data?

Annually. There will be a defined reporting window each year.

The milestone dates for the latest reporting window are available here

{http://www.seai.ie/Your_Business/Public_Sector/Reporting/Submitting_Energy_Data/}

7.2 For which period(s) must we report data?

You must report all data on a calendar year basis for:

- Every year from the start of your preferred baseline period (on a once off basis, to establish your baseline). There is a choice of three baseline periods {FAQ 13.12}.
- The previous calendar year (annually). For the current reporting window, you must report data for the years up to 2016 inclusive.

7.3 What data do we have to report?

The annual reporting process involves undertaking the following reporting steps:

1. Adding / editing organisation details, if necessary, e.g. contact details for key contact etc.
2. Selecting a baseline period {FAQ 13.12} and activity metrics {FAQ 12.1}, and reporting values for the selected activity metrics.
3. Reporting energy usage:
 - Selecting the energy types {FAQ 7.5} that your organisation uses.
 - Entering/editing & validating {FAQ 18.5} your MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} – **this step must be undertaken by the MPRN & GPRN Deadline at the latest.** Non-validated MPRNs or GPRNs or meter numbers entered after this date will not be processed (why? {FAQ 18.8}) for this reporting cycle. *Note that you do not need to enter the consumption data corresponding to these meter numbers. The system automatically accesses this data from the regulated meter operators (ESB MRSO and Gas Networks Ireland).*
 - Reporting your non-network energy consumption data (e.g. for heating oil, diesel, etc.) on an annual basis *at organisation level*.
4. Reporting details on energy saving projects already implemented and proposed for implementation.
5. Reporting details of any formal assessments your organisation has undertaken on its energy management programme.
6. Reviewing a scorecard report.

Steps (1) – (5) must be completed by the Reporting Deadline

The system will not accept reports beyond this deadline.

7.4 What energy consumption must be reported?

The following energy consumption data must be reported by public bodies:

- *Electricity:* All electricity consumed by the public body, which comprises all electricity imported from the grid (i.e. through a meter), all non-fuel renewable electricity generated on site by the organisation (e.g. auto-generating wind turbine) and the output from any landfill gas generation facilities, less any electricity exported by the public body onto the grid. Electricity used to charge electric vehicles offsite is also included.
- *Thermal:* All solid, liquid and gas fuels used for non-transport purposes. This includes both fossil and renewable fuels used for boilers, space & process heating systems, catering, fuel based electricity generators (onsite), CHP plants and in all plant, equipment & other non-road-mobile vehicles. It also includes any heat imported from district heating schemes, net of any heat exported by the public body to district heating schemes.
- *Transport:* All transport fuels used by the public body's transport vehicles (road, rail, air, water). This includes both fossil and renewable fuels.

7.5 Which specific fuels/energy types can we report on?

Public bodies should report their annual consumption subtotals at an organisational level for each of the following energy types:

Electricity:

- Metered electricity;
- Onsite generation by non-fuel renewables or landfill gas generation plants;
- Offsite charging of electric vehicles (i.e. on street charging / station fast charging).

Thermal Energy:

- Natural gas;
- LPG;
- Biogas;
- Kerosene;
- Gasoil;
- Light, medium & heavy fuel oils;
- Coal;
- Manufactured ovoids (smokeless coal);
- Sod peat;
- Peat briquettes;
- Milled peat;
- Wood chips (35% moisture);

- Wood pellets;
- Wood briquettes / logs;
- District heating - heat imported;
- District heating – heat exported;
- Solar thermal.

Transport Energy:

- Road Diesel (DERV);
- Petrol;
- Marked Diesel (Non-thermal use);
- Jet A1 Kerosene (Aviation);
- Aviation Gasoline (AVGAS);
- Pure Biodiesel;
- Biodiesel Blends;
- Bioethanol Blends;
- Pure Bioethanol.

In addition to the above, public bodies can report their consumption of other user-specified thermal and transport fuels.

There is extensive guidance on identifying which fuels are used in these FAQ pages {FAQ 16}.

7.6 What level of data detail do we need to submit?

Public bodies report consumption and activity metric {FAQ 12.1} data on an *organisational* level.

For all energy types except electricity and natural gas, organisations report the consumption sub-total for each energy type across the entire organisation, e.g. separate subtotals for kerosene, LPG, wood chips, diesel, gasoline.

For electricity and natural gas, the organisational-level consumption is calculated automatically by the software by aggregating up meter-level (facility-level) consumption data. However, the public bodies do not have to provide this consumption data; once the MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} have been entered and validated {FAQ 18.5}, SEAI accesses the relevant consumption data annually from the regulated meter operators.

Public bodies can optionally self-report all or part-of their electricity or natural gas consumption, i.e. they can provide organisation-level consumption sub-totals instead of submitting MPRNs and GPRNs.

7.7 What does ‘network-connected’ energy mean?

In the context of this system, network-connected energy supplies refer to either electricity or natural gas.

7.8 What does ‘non-network-connected’ energy mean?

In the context of this system, non-network-connected energy supplies refer to all energy supplies that are not network connected, i.e. all energy types except natural gas and electricity.

Note that LPG is a non-network-connected energy supply.

7.9 Are renewable fuels included?

Yes. The following are all included and should be explicitly reported:

- Renewable electricity generated from onsite non-fuel systems (e.g. onsite wind turbines, solar PV) and from landfill gas systems;
- Renewable thermal fuels (e.g. wood chips), including when used for onsite power generation;
- Solar thermal systems;
- Renewable transport fuels, e.g. biofuels.

Note, however, that the source of electricity purchased (‘imported’) from the electricity network is not specified when reporting your electricity consumption. In other words you do not differentiate between the green/renewable and brown/fossil electricity that your organisation purchases (‘imports’). It is all recorded as imported electricity.

7.10 What units do we use to submit energy data? What are the conversion factors used?

Electricity and natural gas data is sourced automatically from the meter operators in kilowatt hours (kWh). You typically report the other energy data in the units in which it is billed, e.g. litres for heating oils and transport fuels, tonnes for wood chips and solid fuels. The system automatically converts all energy consumption to kWh on a net calorific value basis. It is very important that you enter data in the correct units.

The following are the current conversion factors used to convert energy consumption from the reported units to kilowatt-hours (kWh). The conversion factors are based on net calorific values and they can change slightly from year to year.

Energy Type	Reporting Units	Conversion Factor (to kWh)
Electricity	kWh	1.000
Natural Gas	kWh (Gross)	0.902
LPG	Litre	6.654
LPG	Kilogram	13.099
Biogas	kWh (Net)	1.000
Kerosene	Litre	9.821
Gasoil	Litre	10.169
Light, Medium & Heavy Fuel Oils	Litre	10.786
Coal	Tonne	7,734
Manufactured Ovoids	Tonne	8,889
Sod Peat	Tonne	3,640
Peat Briquettes	Tonne	5,152
Wood Chips (35% moisture)	Tonne (wet)	3,229
Wood Pellets	Tonne	4,800
Wood Briquettes / Logs	Tonne	4,800
District Heat Imported	kWh	1.000
District Heat Exported	kWh	1.000
Solar Thermal	kWh	1.000
Road Diesel (DERV)	Litre	10.169
Petrol	Litre	9.348
Marked Diesel (Non-thermal use)	Litre	10.169
Jet A1 Kerosene (Aviation)	Litre	9.800
Aviation Gasoline (AVGAS)	Litre	9.348
Biodiesel	Litre	9.109
Bioethanol	Litre	5.888

7.11 Our data is in different units. How can we convert to the units used by the system?

The system is designed to accept data in the units in which the different energy types are most frequently sold, recorded and counted. In the unlikely event that your records are in different units, you can use the following conversion factors to convert to the system units:

http://www.seai.ie/Energy-Data-Portal/Frequently-Asked-Questions/data_and_data_manipulation_FAQ/

Remember that 1 GWh = 1,000 MWh = 1,000,000 kWh.

It is very important that you enter data in the correct units.

7.12 What are the carbon emission factors used?

The system calculates the CO₂ emissions attributable to the reported energy consumption using carbon emission factors. These are used to convert energy consumption (in kWh NCV¹) into kg of CO₂ and they can vary slightly from year to year.

Energy Type	kgCO ₂ /kWh (2016)
Net Electricity Imports	0.497
Onsite Generation (Non-fuel Renewables)	0.000
Offsite Electric Vehicle Charging	0.497
Natural Gas	0.205
LPG	0.229
Biogas	0.000
Kerosene	0.257
Gasoil	0.264
Light, Medium & Heavy Fuel Oils	0.274
Coal	0.341
Manufactured Ovoids	0.354
Sod Peat	0.374
Peat Briquettes	0.356
Milled peat	0.414
Wood Chips (35% moisture)	0.000
Wood Pellets	0.000
Wood Briquettes / Logs	0.000
Solar Thermal	0.000
Road Diesel (DERV)	0.264
Petrol	0.252
Marked Diesel (Non-thermal use)	0.264
Jet A1 Kerosene (Aviation)	0.257
Aviation Gasoline (AVGAS)	0.252
Biodiesel	0.000
Bioethanol	0.000

Note that the conversion for a given year do not become available until some months into the following year. The factors in the system – and this FAQ – are updated when they become available. The latest factors are always in the system by the time that the reporting cycle closes.

¹ Net calorific value

7.13 Can we submit energy consumption data in Euro?

No.

While better energy management and energy efficiency does deliver valuable financial savings for organisations, the savings targets at national and organisational levels are based on actual energy consumption, not on energy spend.

At best, energy spend is a relatively crude proxy for energy consumption, not least because different organisations pay different unit rates (due to different scales of consumption) and because of price fluctuations over time.

It is very important that you enter data in the correct units.

7.14 Our organisation has lots of different facilities / sites / locations / energy users. Do we have to report the energy consumption for each of them separately?

No. The data is submitted altogether on an organisational basis.

MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} must be entered at facility level; however, it is not necessary to report consumption for these – the system accesses this data automatically from the regulated meter operators on an annual basis. Entering the MPRNs & GPRNs is a once off exercise, although the list must be reviewed and re-validated {FAQ 18.5} each year.

8 DATA ACCURACY, VALIDITY & COMPLETENESS

8.1 How will SEAI check that submissions are acceptable/valid?

Data validation comprises two main elements:

- Validation rules built into the reporting software to check for order of magnitude errors when entering inputs, e.g. by warning users if the reported energy consumption for a particular fuel is *significantly* higher / lower than that reported for the previous year.
- Data verification assessments (DVA) {FAQ 8.2} of submissions, which consist of a number of levels of rigour. At the 'lowest' level, this can involve a request to a public body to provide substantiation for a specific piece of data submitted (different forms of substantiation may be accepted, depending on the data). More comprehensive assessments can include an 'on-site' review by a suitably qualified SEAI assessor of the submission with the person(s) responsible for its compilation.

DVAs are undertaken immediately after the Reporting Deadline.

8.2 What is a data verification assessment (DVA)?

The purpose of the data verification assessment (DVA) system is threefold:

- Ensure, insofar as practical, that the data which is submitted is robust and verifiable;
- Motivate organisations to submit accurate data;
- 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.

A DVA can be undertaken at a number of levels of rigour. At the 'lowest' level, this can involve a request to a public body to provide substantiation for a specific piece of data submitted (different forms of substantiation may be accepted, depending on the data). More comprehensive assessments can include an 'on-site' review by a suitably qualified SEAI assessor of the submission with the person(s) responsible for its compilation.

While a DVA can focus on any aspect of your submission and all data requested through the M&R system is important, some data items are significantly more likely to be the focus of a DVA. These include:

- Energy consumption for any specific fuel/energy type accepted by the system in the system-specified reporting units (as total final consumption) – for either the baseline period {FAQ 13.12} or the most recent year for which data has been reported (referred to as the *reporting year*);
- Total energy consumption for the organisation in kWh of total final consumption – for either the baseline period or the reporting year;
- Organisation-level activity metric {FAQ 12.1} selected (if a 'non-standard' metric is selected);
- Values reported for the organisation-level activity metric – for either the baseline period or the reporting year;
- Calculated value for the organisation-level (EnPI) {FAQ 12.3} – for either the baseline period or the reporting year.

Depending on the scope of the DVA, up to four sets of assessment criteria may be applied in each DVA, viz.:

- Relevance of ‘non-standard’ organisation-level activity metric (if selected) to what actually drives energy consumption in the organisation;
- Assessment of the sufficiency of the data submitted – was sufficient data provided to generate a scorecard?
- Quantified assessment that the values submitted for the key data outlined above satisfy the Data Acceptability Thresholds {FAQ 8.4};
- Application of professional judgement by DVA Assessor to determine if the data reported is likely to satisfy the Data Acceptability Thresholds {FAQ 8.4}.

DVAs are undertaken immediately after the Reporting Deadline.

Public bodies wishing to use a composite activity metric can request an Activity Metric Review {FAQ 12.24} up to two months before the reporting deadline.

8.3 How will organisations be selected for data verification assessment (DVA)?

Selection for data verification assessment (DVA) {FAQ 8.2} will be dependent on several factors including *inter alia* the apparent validity of the data submitted (as interpreted from the validation rules built into the tool), consistency & completeness of submissions over time, and the findings of previous data verification assessments. Organisations that adjust baseline {FAQ 13.12} and historical data will be more likely to be selected for data verification assessment. There will also be a random element to selection.

Over a quarter of the reports submitted during the last reporting cycle were selected for data verification assessment.

8.4 What are the acceptability thresholds for the data that we submit?

The mechanism for validating submissions is the data verification assessment (DVA) process {FAQ 8.2}, which involves an SEAI assessor evaluating a submission (or part thereof).

It is recognised that some public bodies may struggle to gather good quality data for all of their consumption in earlier years. Public bodies also have the facility to build their baselines {FAQ 13.12} over time, i.e. to improve the quality of their historical data over subsequent annual submissions. To accommodate this, the thresholds for acceptable data accuracy are broader (laxer) in the first few years of the system. As public bodies develop experience with the reporting concept and build their energy management competence and systems, it is reasonable to expect that the quality of their data will improve; therefore, more stringent acceptability thresholds apply from the 2014 reporting cycle onwards. Note, however, that the DVA thresholds shown below for the 2014 reporting cycle and beyond are somewhat less stringent than those that SEAI had previously indicated would apply.

The following are the thresholds beyond which submissions will be deemed to have failed data verification assessments.

Parameter	Threshold of Acceptable Data		
	2011 - 2013 Reporting Cycle	2014 Reporting Cycle	2015 Reporting Cycle Onwards
1. Total energy consumption reported by the public body for the reporting year or for baseline period {FAQ 13.12} (as Total Final Consumption)	<±10% error	<±7.5% error	<±5% error
2. Organisation-level activity metric {FAQ 12.1} for the reporting year or for the baseline period	<±10% error	<±7.5% error	<±5% error
3. Organisation-level (EnPI) {FAQ 12.3} (reporting year or baseline period)	<±10% error	<±7.5% error	<±5% error
4. Reported energy consumption for any one energy type that is ≥5% of TFC for the reporting year or for the baseline period	<±6% error	<±5% error	<±5% error
5. Subtotal of reported energy consumption that is based on professional judgement alone (i.e. there is insufficient documented evidence in substantiation of the data) for the reporting year or for the baseline period	<±5% of reported TFC ²	<±5% of reported TFC	<±5% of reported TFC

Note that these thresholds will be applied retrospectively to the baseline period, e.g. from the 2015 reporting cycle onwards the acceptable error threshold for the values reported for the organisation-level activity metric in the baseline period (i.e. for parameter 2) will be ±5% error *even if those values were reported prior to 2015*. Put simply, the activity metric data in the monitoring & reporting system for the baseline period can be ±10% in 2013 but it must be ±5% by 2015.

At the end of a DVA, the submission under assessment will be classified as either:

- ‘Passed’ – the submission passed the assessment and the reported data is deemed to be complete.
- ‘Fail (Major)’ – the submission failed the assessment by breaching one or more of the error thresholds for parameters 1-3 above, or the organisation is using a non-standard organisation-level activity metric that is not deemed to be robust or appropriate for use for that organisation. The organisation’s report will be listed by SEAI as “Report not complete”.
- ‘Fail (Minor)’ – the submission failed the assessment by breaching one or more of the error thresholds for parameters 4-5 above, or the organisation is using a non-standard organisation-level activity metric that is not deemed to be robust or appropriate for use for that organisation. The organisation has an opportunity to resubmit some data to rectify the error;
- ‘Incomplete DVA’ – the data verification assessment could not be completed because there was insufficient engagement between the public body and the SEAI assessor.

SEAI recognises that certain aspects of historical consumption can be difficult to quantify. Therefore, the above criteria will not be applied in the following specific instances, provided that public bodies fully comply with the criteria and guidance referenced below:

² Total final consumption

- Historical energy consumption of petrol, diesel, gas oil, kerosene or LPG consumption up to and including 2014 – this consumption may be derived from financial records in accordance with this methodology {FAQ 7.7} provided that the public body lacks sufficient records of historical energy consumption.
- Historical energy consumption of diesel by contractor mobile plant or machinery up to and including 2014 – this consumption may be derived from other data in accordance with this methodology {FAQ 7.7} provided that the public body lacks sufficient records of historical energy consumption.

8.5 Can we report data based on estimates or professional judgement alone?

An element of professional judgement is required in collating all energy data for submission, including that extracted from robust, well-documented sources. However, you should be able to provide documented evidence in support of submitted data. This could range from suppliers' bills to internal records etc.

Notwithstanding this requirement for evidence, data derived from estimates based on professional judgement alone (i.e. where there is insufficient documented evidence in substantiation of the data) is acceptable, subject to the following thresholds: the subtotal of reported energy consumption that is based on professional judgement alone for the reporting year or for the baseline period {FAQ 13.12} is $\leq \pm 5\%$ of reported total final energy consumption.

These thresholds are discussed in more detail in FAQ 8.4.

8.6 Is there a *de minimus* level below which we can ignore smaller elements of our energy consumption?

No. All consumption is reportable, including relatively minor consumption of non core energy streams. However, smaller elements of your organisation's overall consumption can be estimated based on professional judgement – see FAQ8.5.

8.7 Can we derive our energy consumption data from financial records?

Only for the exceptional circumstances set out below in this FAQ and in accordance with the guidance documented below.

Public bodies should only choose one of the earlier baseline periods {FAQ 13.12} if they have robust data to populate that baseline. In general, consumption data derived from financial records (i.e. back-calculated from Euro spend) is not considered robust in this regard. They are typically a poor proxy for consumption. The main reason for this is the difficulty in reliably deriving kilowatt hour (or equivalent values) from Euros. For example, in the last 6 months of 2008 alone there was a 30% swing in diesel prices. 5% price swings month-to-month are not unheard of and there is considerable variation in diesel prices regionally.

Therefore, in general, energy consumption data derived from financial records are unlikely to be acceptable.

However, where a public body lacks sufficient records of historical energy consumption *for petrol, diesel, gas oil, kerosene or LPG consumption up to and including 2014*, then the following are acceptable methodologies to estimate the relevant energy consumption. The methodologies will only be deemed acceptable during a DVA if a public body can demonstrate that more robust data was not readily available, e.g. fuel card data.

The following methodologies for deriving energy consumption data from financial records are only acceptable:

- **For petrol, diesel, gas oil, kerosene and LPG consumption for the years up to and including 2014, and;**
- **Where the public body lacks sufficient records of historical energy consumption.**

The public body should:

1. Determine the monthly energy spend in Euro (incl. VAT) for each fuel type from financial records.
2. Source historical monthly unit price data for the relevant fuel type from the fuel supplier or, where actual historical fuel price data is not available, from the monthly fuel price data collated by SEAI, which is available [here](#).
3. Calculate the energy consumption (in litres) for each month by dividing the monthly energy spend by the fuel price for the relevant month.
4. Calculate the annual energy consumption (in litres) by summing the monthly energy consumption values.
5. Where this methodology is used to estimate energy consumption for an organisation's baseline year(s), the annual value(s) calculated in accordance with step 4 for the baseline years (only) must be reduced by 3% e.g. if an organisation selected 2009 as its baseline year and the calculated diesel consumption was 100,000 litres for 2009, then the value that should be carried forward to step 6 (i.e. entered into the M&R system) should be 97,000 litres. This discount factor is applied to ensure that no energy efficiency gains arise by deriving energy consumption from financial records. This discount factor should only be applied for baseline year(s), i.e. no discount should be applied if the methodology is used to calculate consumption for non-baseline years.
6. Self report the annual energy consumption for each year in the normal manner.

If, and only if, monthly energy spend data is not available, public bodies should:

1. Determine their annual spend for each energy type in Euro (incl. VAT) for each fuel type from financial records.
2. Break down the annual spend between each month in accordance with best professional judgement, which should reflect actual, logical or likely usage patterns over the year. If the organisation cannot allocate the annual spend on a monthly basis in this manner, then it should do so by dividing it equally across the twelve months.
3. Source historical monthly unit price data for the relevant fuel type from the fuel supplier or, where actual historical fuel price data is not available, from the monthly fuel price data collated by SEAI, which is available [here](#).

4. Calculate the monthly energy consumption (in litres) by dividing the monthly euro spend for each energy type by the fuel price for the relevant month.
5. Calculate the annual energy consumption (in litres) by summing the monthly energy consumption values.
6. Where yearly invoiced amounts are used to estimate energy consumption for an organisation's baseline year(s), the self reported consumption should be reduced by 4%. This discount factor is applied to ensure that no energy efficiency gains arise from deriving energy consumption from annual financial records. This discount factor should only be applied for baseline year(s), i.e. no discount should be applied if the methodology is used to calculate consumption for non-baseline years.
7. Self report the estimated annual energy consumption total for each energy type in the normal way.

Public bodies are required to keep documented records of the calculations used to determine the quantities reported through the M&R system and are likely to be asked to provide the relevant calculations as evidence during a data verification assessment (DVA).

8.8 We want to calculate (or estimate) our historical consumption in a certain way – how do we know if this is acceptable?

The onus is on public bodies themselves to ensure that the data submitted meets the data validity criteria, including the acceptability thresholds set out in FAQ 8.4.

SEAI cannot advise public bodies on the acceptability of specific approaches proposed to calculate or estimate historical consumption, or on the acceptability of the assumptions that underpin them.

8.9 What happens if we submit a complete report?

If you submit a complete report that is either (a) not selected for data verification assessment or (b) is selected for assessment and subsequently passes the assessment, then your organisation is listed (published) by SEAI along with its performance score (EnPI savings) {FAQ 15.35}.

8.10 What happens if we do not submit a report?

If your organisation does not submit a report then it will be listed (published) by SEAI accordingly. No scorecard will be produced.

8.11 What happens if we do not enter sufficient data to submit a report?

If your organisation submits insufficient data for a report then it will be listed (published) by SEAI as not having submitted a complete report. No scorecard will be produced.

8.12 What happens if our submission is selected for data verification assessment and fails the assessment?

If the error or omission in your data is relatively minor, then you will be given an opportunity to submit additional data (by a tight deadline). Your organisation's scorecard will be calculated in the normal way {FAQ 15.35}. Your organisation will be listed (published) by SEAI in the normal way.

If the error or omission in your data is more significant (major), then your organisation will be given an opportunity to submit additional data (by a tight deadline). Your organisation's scorecard will be calculated in the normal way {FAQ 15.35}. However, your organisation's listing in SEAI's publication will be annotated with a note highlighting that SEAI identified a data quality issue with your submission.

The thresholds for minor and major errors are discussed in more detail in FAQ 8.4.

8.13 We have gathered together most of our data but we know that we are missing data for some relatively minor elements of our consumption. We would like to submit the data that we do have now and then submit the missing data next year. What should we do?

All data entered must be valid and robust. Data will be subject to review for validity. However, it is recognised that some public bodies may struggle to gather all of the required data within the reporting window, especially in the first few years when they may be developing better information systems to collate and report data internally.

In this context, if your data is almost complete but is missing some elements *that you believe you will be able to gather and report in future years*, then you should classify your submission using the two data completeness fields in 'Main Reasons for 201X Energy Performance' (see data entry tile (5) Exemplar Energy Management {FAQ 15.24}).

Notwithstanding this, there is limited value in submitting only partial data that is not substantially complete. Furthermore, you should only submit 'incomplete' data if you genuinely intend to fill the gaps in the subsequent reporting cycle. Incomplete submissions will not be accepted as final demonstrations of progress against the 2020 target.

9 REPORTING ELECTRICITY CONSUMPTION

9.1 What electricity consumption should be reported?

All of the organisation's electricity consumption, which comprises all electricity imported from the grid (i.e. through a meter) less electricity exported by the public body onto the grid, plus all 'non-fuel' renewable electricity generated *on site* by the organisation (e.g. auto-generating wind turbine, small scale hydro facility) plus the output from landfill gas generations facilities. Electricity used to charge electric vehicles offsite is also included.

9.2 Do we have to work out how much electricity & natural gas we use and report ourselves?

No. All you have to do is enter your meter numbers (MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2}) into the system and the system then automatically accesses the consumption data corresponding to each meter directly from the regulated meter operators (ESB MRSO and Gas Networks Ireland). The meter operators can provide consumption records to SEAI for all MPRNs and GPRNs from 2006 onwards no matter which electricity and gas suppliers you use/used.

Therefore, you do not have to calculate, and must *not* report the energy consumption corresponding to the validated {FAQ 18.5} meters (MPRNs & GPRNs) in the system.

Entering the MPRNs & GPRNs is a once off exercise, although the list must be reviewed and re-validated each year. MPRNs or GPRNs that have not been validated cannot be processed by SEAI.

Notes:

- You must validate {FAQ 18.5} your MPRNs and GPRNs by the [MPRN & GPRN Deadline](#) at the latest. Non-validated MPRNs or GPRNs or meter numbers entered after this date will not be processed (why? {FAQ 18.8}).
- At the moment, it takes several months for the data exchange process, i.e. for SEAI to access the consumption data. SEAI hopes to streamline this process in future years.
- You have the option to self-report {FAQ 9.3} your electricity (or natural gas) consumption instead of submitting MPRNs (GPRNs), in which case you only need to submit consumption data at an organisation level. *You should be careful not to double count your consumption, i.e. not to self-report consumption through MPRNs (GPRNs) that you have also entered into the system.*

9.3 Can we self-report our consumption of electricity from the grid?

Yes. While it is preferable – and in most cases simpler – to enter the MPRNs {FAQ 18.1} for your electricity connections and let SEAI access the consumption data directly from the meter operator (ESB MRSO), this is not possible in all cases. In these instances, you can self-report the balance of your organisation's electricity consumption. However, you should be careful not to double count your consumption, i.e. not to self-report consumption through MPRNs that you have also entered into the system.

As the MPRN-derived consumption data is not available for the period 2001-2005, public bodies wishing to use this earlier baseline {FAQ 13.12} must self-report their consumption for this period.

9.4 We purchase renewable electricity from the grid. How should we account for this?

There is no requirement to report the source (or fuel or generation type) of any electricity that your organisation purchases. Therefore, you are not required to differentiate between renewable electricity or brown electricity purchased by your organisation.

9.5 How should we account for fuel-based onsite electricity generation?

Some organisations have onsite *fuel-based* electricity generators, i.e. they consume one or more fossil or renewable fuels to generate electricity.

You account for onsite *fuel-based* electricity generators as follows:

- Include all of the fossil fuels and renewable fuels consumed by the generator plants in the relevant thermal fuel field(s), e.g. if you have a gasoil generator, you should include its consumption in your gasoil subtotal.
- Report the MPRN {FAQ 18.1} for the network connection for the facility / building at which the generator is located. Note that this MPRN is unlikely to be specific to the generator, i.e. it is likely to be the MPRN for the entire facility / building. Report the MPRN in the normal way.
- *Only in cases where you are self-reporting electricity consumption for the years 2001-2005 (i.e. if you have chosen the 2001-2005 baseline {FAQ 13.12}):* ensure that any electricity that is exported 'over the fence' onto the public electricity system is not included in your self-reported electricity consumption subtotal. (Note: the 'Net Electricity Import data' returned by the meter operator for your MPRNs is net of electricity exports. In this regard, you should ensure that all MPRNs through which your organisation exports electricity onto the grid are included on your MPRN list – as per the above bullet.)

Note: there is no need to explicitly report the amount of electricity actually generated onsite from thermal electricity generators.

Note that the treatment of certain other electricity generators is different – click below for relevant FAQs:

- CHP {FAQ 9.6};
- Non-fuel renewable electricity generators (e.g. wind turbines, hydro, solar PV) that *are located within the meter boundary* of one of the public body's own energy consuming facilities {FAQ 9.7};
- Landfill gas generation plants {FAQ 9.8};

Neither power stations nor non-fuel renewable electricity generators (e.g. wind turbines, hydro, solar PV) that are *located outside the meter boundary* of one of the public body's own energy consuming facilities {FAQ 3.20} are included in M&R.

9.6 How should we account for CHP?

CHP is accounted for in a similar manner to *fuel-based* onsite electricity generators:

- Include all of the fossil fuels and renewable fuels consumed by the CHP in the relevant thermal fuel field(s), e.g. if you have a biomass CHP, you should include its consumption in your biomass subtotal.
- Report the MPRN {FAQ 18.1} for the network connection for the facility / building at which the CHP plant is located. Note that this MPRN is probably not specific to the CHP unit, i.e. it is likely to be the MPRN for the entire facility / building. Report the MPRN in the normal way.
- *Only in cases where you are self-reporting electricity consumption for the years 2001-2005 (i.e. if you have chosen the 2001-2005 baseline {FAQ 13.12}):* ensure that any electricity that is exported 'over the fence' onto the public electricity system is not included in your self-reported electricity consumption subtotal. (Note: the 'Net Electricity Import' data returned by the meter operator for your MPRNs is net of electricity exports. In this regard, you should ensure that all MPRNs through which your organisation exports electricity onto the grid are included on your MPRN list – as per the above bullet.)
- Include any heat that is exported 'over the fence' to other organisations in the 'District Heating - Heat Exported' subtotal.

Note: there is no need to explicitly report the amount of electricity or heat actually generated by the CHP plant(s).

9.7 How should we account for *non-fuel* renewable generators onsite, e.g. wind turbines?

A small number of organisations have *non-fuel* renewable generators *within the meter boundaries of their energy consuming facilities*, e.g. onsite wind turbines or onsite hydro plants. These are generation systems which supply (part of) their electricity output directly to the site/facility without going through an MPRN (i.e. without going through a meter connected to the national electricity distribution or transmission system). Some of their output may also be exported onto the national electricity distribution or transmission system. You should report the output from these systems as follows:

- Include *all* of the electricity generated by the onsite non-fuel renewable generators in the 'Electricity – Onsite Generation by Non-fuel Renewables or Landfill Gas' subtotal (no matter where this electricity is consumed).
- Report the MPRN {FAQ 18.1} for the network connection for the facility / building at which the renewable generator is located. Note that this MPRN is unlikely to be specific to the generator, i.e. it is likely to be the MPRN for the entire facility / building. Report the MPRN in the normal way. *Only in cases where you are self-reporting electricity consumption for the years 2001-2005 (i.e. if you have chosen the 2001-2005 baseline {FAQ 13.12}):* ensure that any electricity that is exported 'over the fence' onto the public electricity system is not included in your self-reported electricity consumption subtotal. (Note: the 'Net Electricity Import' data returned by the meter operator for your MPRNs is net of electricity exports. In this regard, you should ensure that all MPRNs through which your organisation exports electricity onto the grid are included on your MPRN list – as per the above bullet.)

Note that non-fuel renewable electricity generators (e.g. wind turbines, hydro, solar PV) that *are not* located within the meter boundaries of public bodies' own energy consuming facilities are not included in M&R {FAQ 3.20}.

Note also that the treatment for onsite *fuel-based* electricity generators (e.g. diesel generators, CHP) is different (see FAQs above).

9.8 How should we account for landfill gas generation plants?

You should account for landfill gas generation plants in the same manner no matter whether they are located *inside or outside* the meter boundaries of their energy consuming facilities. You should report the output from these systems as follows:

- Include *all* of the electricity generated by the landfill gas generation plants in the 'Electricity – Onsite Generation by Non-fuel Renewables or Landfill Gas' subtotal (no matter where this electricity is consumed).
- Report the MPRN {FAQ 18.1} for the network connection for the facility at which the landfill gas generator is located. Report the MPRN in the normal way.
- *Only in cases where you are self-reporting electricity consumption for the years 2001-2005 (i.e. if you have chosen the 2001-2005 baseline {FAQ 13.12}):* ensure that any electricity that is exported 'over the fence' onto the public electricity system is not included in your self-reported electricity consumption subtotal. (Note: the 'Net Electricity Import' data returned by the meter operator for your MPRNs is net of electricity exports. In this regard, you should ensure that all MPRNs through which your organisation exports electricity onto the grid are included on your MPRN list – as per the bullet above.)

9.9 We export electricity onto the electricity network. How do we account for this?

The 'Net Electricity Import' data returned by the meter operator for your MPRNs is net of electricity exports. In this regard, there is no need to explicitly report electricity exports from 2006 onwards; however, you should ensure that all MPRNs through which your organisation exports electricity onto the grid are included on your MPRN list.

If you have chosen the 2001-2005 baseline {FAQ 13.12}, you need to self-report your electricity consumption for these years. In this instance, you should deduct any electricity that is exported 'over the fence' onto the public electricity system from your gross electricity imports.

9.10 We charge electric vehicles offsite. How do we account for this?

Electric vehicles can be charged using:

- Electricity from one or more of your organisation's sites. This electricity consumption is captured by your MPRN electricity consumption. There is no need to self-report this electricity consumption explicitly. However, you should ensure that all of your organisation's MPRNs are included.

- Electricity from public charge points. Any electricity used to charge vehicles from on street charge stations or from fast chargers in service stations is not accounted for via MPRNs. Therefore, this consumption must be explicitly reported in the relevant section of the system.

9.11 Why are we asked to report how much electricity we consume for space heating?

A relatively small number of public bodies use a significant portion of their electricity consumption for space heating, i.e. for heating their buildings. (The majority of public bodies use thermal energy for space heating, e.g. natural gas, heating oil.)

If your organisation does use a significant amount of electricity for space heating, you can *optionally* report the relevant percentage of your organisation's total electricity consumption. The system then adjusts this consumption quantity for degree days to account for weather-related variations in energy consumption.

If you leave this field blank, the system assumes that your organisation only uses thermal energy for space heating and it does not adjust your *electricity consumption* for degree days.

9.12 We do not know how much electricity we consume for space heating. What should we enter for the percentage electricity used for space heating?

The majority of public bodies only use thermal energy for space heating, e.g. natural gas, heating oil. In these cases, the percentage of electricity used for space heating is zero. If you leave this field blank, the system also assumes that the percentage is zero.

If your organisation does consume electricity for space heating, then you should enter your best estimate.

10 REPORTING THERMAL ENERGY CONSUMPTION

10.1 What is meant by thermal energy?

In the context of the reporting system, thermal energy refers to 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 (onsite), CHP and in all plant, equipment & other non-road mobile vehicles. It also includes any heat imported from district heating schemes, net of any heat exported by the public body to district heating schemes.

10.2 Can we self-report our consumption of natural gas from the gas grid?

Yes. While it is preferable – and in most cases simpler – to enter the GPRNs {FAQ 18.2} for your natural gas connections and let SEAI access the consumption data directly from the meter operator (Gas Networks Ireland), this is not possible in all cases. In these instances, you can self-report the balance of your organisation's natural gas consumption. However, you should be careful not to double count your consumption, i.e. not to self-report consumption through GPRNs that you have also entered into the system.

As the GPRN-derived consumption data is not available for the period 2001-2005, public bodies wishing to use this earlier baseline {FAQ 13.12} must self-report their consumption for this period.

10.3 We use wood chips with a moisture content other than 35%. How should we report this consumption?

Wood chips are available in several different specifications. The key parameter in specifying wood chip supplies is the moisture content: the higher the moisture content, the less energy content per unit weight.

The reporting tool can accommodate reported consumption for wood chips with 35% moisture content. These have an energy content (referred to as the *net calorific value*) of 3,700 kWh per tonne of wet chips. If your wood chips have a higher or lower moisture content they will have a different energy content. Entering the consumed tonnage of these chips under 'Wood Chips (35% moisture)' would distort your overall energy figures when converted to kWh.

Therefore, such consumption should be recorded using the 'Add Other Energy Type' function {FAQ 15.15}. In order to do this, you will need to enter the number of tonnes of (wet) chips consumed and the 'Conversion Factor (to kWh)' for converting from wet tonnes to kilowatt hours (kWh). You can work out the conversion factor - *from wet tonnes to kWh* - for your wood chips as follows:

$$\text{Conversion Factor} = \text{Net Calorific Value} = 277.78 \times (19.2 - (0.2164 \times \text{MC})) \text{ kWh/wet tonne}$$

where MC is the percentage moisture content. So, for example, the conversion factor for 30% moisture wood chips is:

$$277.78 \times (19.2 - (0.2164 \times 30)) \text{ kWh/wet tonne} = 3,530 \text{ kWh/tonne}$$

Additional information on wood energy is available from Coford's wood energy FAQ at www.woodenergy.ie/frequentlyaskedquestions/.

10.4 We use wood chips in a boiler but we measure the heat output rather than the biomass fuel input. How should we report this consumption?

The basis for reporting consumption data is the quantity of input fuel that is consumed. However, in some cases this may not be measured.

If you consume wood chips in a boiler but you do not measure the quantity of wood chips consumed and you do measure the heat output – via a heat meter – then you should use the following alternative approach to report your consumption:

- Determine the quantity of heat output from the boiler in the year – as measured by the heat meter. It is likely that the heat meter readings are in kWh; if not, then convert the data to kWh.
- Divide the total quantity of heat output from the boiler by the actual average thermal efficiency of the boiler during the year. This will give you the heat input in kWh.
- Divide the heat input in kWh by 3,229 kWh/tonne to calculate the quantity of wood chips consumed in tonnes.
- Report this quantity of wood chips in tonnes as 'Wood chips (35% moisture)'.

10.5 We have solar thermal systems. How should we report this consumption?

If your organisation uses these systems and you can work out how much energy they provide (many are unmetered), you can report this in the relevant field in kilowatt hours (kWh).

10.6 We have heat pump systems. How should we report this consumption?

You do not explicitly report the electricity consumption by, or the heat output from, heat pump systems. The electricity input to these systems is reported as part of your organisation's overall electricity consumption – it is not explicitly reported as heat pump consumption. The methodology used for aggregating energy consumption across your organisation – using the total primary energy requirement (TPER) {FAQ 13.4} – implicitly accounts for the efficiency benefits of heat pumps.

10.7 What is district heating?

District Heating refers to systems for distributing heat through insulated pipes in the form of hot water (sometimes steam). The hot water is passed through heat exchangers to provide hot water and space heating in buildings. District heat is measured in kilowatt hours (kWh).

10.8 We consume heat from a district heating system. How should we account for this?

The way you report district heating consumption depends on the configuration of the district heating network. The overall reporting principle is that the primary energy (e.g. gas, wood chips) and the distributed heat energy should not be double counted.

- For district heating networks that are *only* fed from your organisation's* own boilers (or CHP etc.) you should report the primary energy used in the boilers etc. under the relevant fuel type (e.g. gas, wood chips etc.). You should *not* report any consumption for these systems under 'District Heating – Heat Imported'.
- If the district heating system is (also) fed from one or more heat sources (e.g. boilers / CHP units) that is not attributable to your public body*, then you should report the heat that is imported 'over the fence' from the district heating network by your organisation as 'District Heating – Heat Imported'. In these instances, you should *not* report the primary energy consumption (i.e. gas, wood chips etc.) of the external heat generation facilities.

*In considering which of the above applies to your organisation, remember that the primary energy consumption of an onsite boiler (or CHP unit) is reportable by the relevant public body even if that plant is operated or owned by a private contractor {FAQ 3.7}.

If your organisation also supplies heat into a district heating system, then see the FAQ on supplying district heat {FAQ 10.9}.

10.9 We supply heat into a district heating system. How should we account for this?

The way you report district heating consumption depends on the configuration of the district heating network. The overall reporting principle is that the primary energy (e.g. gas, wood chips) and the distributed heat energy should not be double counted.

- If the district heating system only serves your own organisation, then all you need to do is report the energy consumed in the boiler(s) and/or CHP plant(s) in the normal way**, i.e. in the relevant subtotals for gas, oil, wood chips, etc. You should *not* report the heat energy distributed through the district heating system.
- If the district heating system (part-)serves heat customers that are not part of your organisation, then you should:
 - Report the energy consumed in the boiler(s) and/or CHP plant(s) in the normal way**;
 - Include any heat that is exported 'over the fence' to other organisations as 'District Heating – Heat Exported'.

**In considering which of the above applies to your organisation, remember that the primary energy consumption of an onsite boiler (or CHP unit) is reportable by the relevant public body even if that plant is operated or owned by a private contractor {FAQ 3.7}.

If your organisation also consumes energy from a district heating system, then see the FAQ on consuming district heat {FAQ 10.8}.

11 REPORTING TRANSPORT FUEL CONSUMPTION

11.1 Should we include transport fuels?

Yes. All fuels – fossil and renewable – used for land-based, water-based or airborne modes of transport owned or operated by public bodies should be included in annual submissions of consumption data.

This includes the energy consumption by certain outsourced services or functions {FAQ 3.4}.

11.2 Where should we report the consumption of marked diesel (gasoil) by our mobile plant and machinery?

This should be reported under ‘Marked Diesel (Non-thermal)’ under ‘Transport Fuels (Mineral Oil Fuels)’. It should include all diesel / gasoil consumption in generators, mobile plant, construction machinery, agricultural machinery and marine engines.

Only gasoil / marked diesel consumption for thermal applications (typically building energy consumption) should be reported under ‘Gasoil’ in the ‘Heating Oils’ section.

If it is not possible to disaggregate these two consumption categories, then the total consumption should be reported in whichever of the above categories dominates consumption (but not in both).

11.3 We lack sufficient data for historical diesel consumption used by contractors in mobile plant and machinery. How should we account for this?

Public bodies should ensure that appropriate systems are in place to record energy consumption data accurately and that service providers are contractually obligated to provide relevant consumption data to the public body.

However, it is recognised that some public bodies, especially local authorities, may struggle to gather good quality data for historical diesel consumption used by contractors in mobile plant and machinery. In these instances, the following methodologies can be used to estimate diesel consumption. The methodologies will only be deemed acceptable during a data verification assessment if a public body can demonstrate that more robust data was not readily available, e.g. actual contractor consumption records. Public bodies should pick the most robust workable approach from the options below.

Option 1 - Machinery Run Hours and Fuel Consumption

Where sufficient information is available, the public body should:

1. Analyse the type of mobile plant and machinery used by contractors and estimate the hourly fuel consumption (in litres/hour) used by each type of mobile plant and equipment e.g. JCB, generator, compressor, loader etc. Fuel consumption could typically range from 1-11 litres/hour depending on the type of plant/equipment used.

2. Quantify the annual run hours for each type of mobile plant and machinery from internal/external records e.g. from hour meters in machine cabs or from invoices from contractors.
3. Calculate the fuel consumed (in litres) by each type of mobile plant and equipment by multiplying the fuel consumption (in litres/hour) by the run hours for each type of mobile plant and machinery.
4. Calculate the annual fuel consumption by summing the energy consumption estimated for each type of mobile plant and equipment.
5. Self report the estimated annual energy consumption total in the normal way as 'Marked Diesel (Non-thermal)' under 'Transport Fuels (Mineral Oil Fuels)'.

Public bodies are required to keep documented records of the calculations used to determine the quantities reported through the M&R system and are likely to be asked to provide the relevant calculations as evidence during a data verification assessment.

Option 2 - Contractor Invoices

Where run hour data is not available, public bodies can use the following methodology to estimate the diesel consumption. Public bodies should:

1. Analyse the amounts (in Euro) invoiced annually by each contractor that uses mobile plant and machinery.
2. Estimate the percentage of the annual invoiced amount (in Euro) attributable to fuel consumption for each contractor i.e. exclude any amounts related to labour, contractor profits/overhead. The percentage should be estimated following discussions with contractors and/or following a review of any relevant historical documentation provided by the contractor e.g. daily labour rates.
3. Calculate the annual energy spend attributable to diesel use by contractor mobile plant and equipment by summing the estimated values for annual energy spend for each contractor.
4. Estimate the annual diesel consumption (in litres) using the methodology set out in {FAQ 8.7} for deriving energy consumption from the annual energy spend.
5. The process for determining the percentage of the annual invoice amount attributable to marked diesel consumption should be recorded for each (type of) contractor.

Public bodies are required to keep documented records of the calculations used to determine the quantities reported through the M&R system. They are likely to be asked to provide the relevant calculations as evidence during a data verification assessment.

The methodologies outlined above will only be acceptable for reporting energy consumption up to 2014.

11.4 Where should we report the consumption of compressed natural gas (CNG)?

Compressed natural gas (CNG) is used for some transport applications. It is not explicitly listed as a fuel type in the system. There are two alternative options for reporting the consumption of CNG for transport purposes:

- If the CNG is dispensed from an onsite fuelling facility supplied through one of your organisation's GPRNs, then enter the GPRN in the normal way.
- If the CNG is dispensed from an external gas supply, then self-report the consumption by creating a new energy type using the 'Add Other Energy Type' function {FAQ 15.15}. It would be appropriate to use the M&R system values for calorific value {FAQ 7.10}, primary energy conversion factor {FAQ 13.8} and CO₂ emission factor {FAQ 7.12}

12 REPORTING ACTIVITY METRICS

12.1 What is an activity metric?

An activity metric is a measure of the activity that your organisation undertakes. (In the simplistic example of a coffee stall, a good activity metric would be the number of cups of coffee sold in a year.)

Unfortunately, good activity metrics {FAQ 12.10} are more difficult to define and calculate for large service based organisations. However, all organisations have some way of formally measuring their activity. For example, a very common activity metric in the public sector is full time equivalent (FTE) employment {FAQ 12.19}.

12.2 Why do we have to report activity metrics?

Activity metrics {FAQ 12.1} are required to determine your organisation's energy performance by calculating an energy performance indicator (EnPI) {FAQ 12.3}.

12.3 What is an Energy Performance Indicator (EnPI)?

An energy performance indicator (EnPI) is a way of measuring your organisation's energy performance. An EnPI is calculated by dividing the total energy consumption by an activity metric {FAQ 12.1}:

$$EnPI = \frac{Energy\ Consumption}{Activity\ Metric}$$

An EnPI may also be referred to as *specific energy consumption*.

12.4 What is the difference between an EPI and an EnPI?

There is no difference. Both 'EPI' and 'EnPI' {FAQ 12.3} are common acronyms for energy performance indicators. 'EnPI' is the nomenclature used in the ISO International Standard ISO 50001 on energy management systems. For this reason 'EnPI' is used for the monitoring & reporting system.

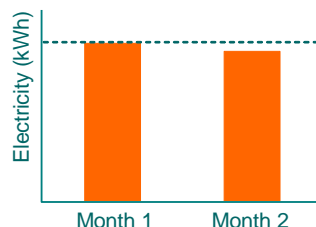
12.5 Why do we need to calculate an Energy Performance Indicator (EnPI)?

Many organisations mistakenly try to measure their energy performance simply in terms of the total energy used. But energy performance is not the same as energy use. Measuring energy use alone does not enable you to determine if energy is being used *efficiently* or not.

A much better approach is to use an Energy Performance Indicator (EnPI) {FAQ 12.3} – based on a good activity metric {FAQ 12.1} – to measure performance. This enables you to determine how

efficiently your organisation is using energy because it accounts for changes in the activity level (i.e. the activity metric) of your organisation.

Consider the following simple example: If a coffee stall reduces its electricity consumption by 5% from the previous month, it may appear to be managing its energy consumption well:



But if the 5% reduction coincides with a 20% drop in the number of cups of coffee sold, then the energy used per cup of coffee sold has actually increased. Therefore, the energy performance – or energy efficiency – has worsened. This ratio of energy used per cup of coffee sold is the Energy Performance Indicator or EnPI for the coffee stall:



12.6 How many different EnPIs are calculated for our organisation?

The system calculates up to four EnPIs {FAQ 12.3} for all organisations:

- An organisation-level EnPI based on the organisation's total energy consumption. This is the basis for calculating the organisation's energy savings each year and its progress against the target.
- An electricity EnPI based on the organisation's electricity consumption.
- A thermal fuels EnPI based on the organisation's thermal fuels consumption.
- A transport fuels EnPI based on the organisation's transport fuels consumption.

Note that only the first EnPI is used to track your organisation's performance; the other three are for information purposes only. Hopefully, they will provide some insight into how your organisation uses energy and facilitate your energy management efforts.

The first three EnPIs listed above incorporate an adjustment for degree days to account for weather-related variations.

The different EnPIs will give you insight into different aspects of your organisation's energy performance. The default approach is to use the main organisation-level activity metric for all four EnPIs. Depending on the type of organisation, users can optionally select different activity metrics {FAQ 12.1} for the different EnPIs. The reason for this is that the underlying activity driving the

energy consumption for the different energy types (i.e. electricity, thermal, transport) can be very different. For example, a key driver for thermal energy consumption could be the amount of building space to be heated whereas the activity metric for transport fuels would be kilometres-travelled.

12.7 How many different activity metrics do we need to report?

Between two and six activity metrics {FAQ 12.1}:

All organisations must report on their full time equivalent (FTE) employees and total useful floor area (TUFA) {FAQ 12.18}. You must also report an organisation-level metric to calculate your organisation-level EnPI.

The system allows you to optionally report different activity metrics for each of electricity, thermal & transport.

12.8 What activity metric(s) should we report?

The system suggests an activity metric {FAQ 12.1} that is appropriate for the organisation. All organisations except non-ETB schools, can select from alternative choices, with the metric shown first being the *most likely* to be the most appropriate for your organisation.

All public bodies are different and the 'standard' activity metric may not be the most appropriate for your organisation. Therefore, if you believe that your organisation should report an activity metric that is not included in the list, then you can do so. However, if you use an unlisted metric you must outline the rational for your selection. See FAQs below for discussion on what constitutes good activity metrics.

Public bodies wishing to use a composite activity metric can request an Activity Metric Review {FAQ 12.24} up to two months before the reporting deadline.

At a minimum, all public bodies are required to report the following activity metrics:

- Full time equivalent (FTE) employees;
- Total useful floor area (TUFA).

You are obliged to report these two activity metrics even if you have selected an alternative activity metric as the bases for your EnPI {FAQ 12.3}. The reason for this is these metrics are used to calculate energy performance on an aggregate basis across the entire public sector. Even though you must report data for these metrics, these metrics are not used to track your organisation's energy performance unless you have selected one of them as the basis of one of your energy performance indicator.

The values reported for all activity metrics must correspond to the relevant reporting year.

12.9 Do we have to report activity metrics?

Yes.

12.10 What makes a good activity metric?

A good EnPI {FAQ 12.3} demonstrates a clear link between energy use and the activities that directly influence consumption. Ideally, the activity metric {FAQ 12.1} should quantify the key activities that affect energy use. However, selecting a good activity metric for an entire organisation can be tricky. The most important characteristics for a good activity metric are that it is:

- Relevant to what actually drives energy consumption;
- Well defined;
- Understandable;
- Measurable.

Data availability is also a key factor, especially for large, complex and multi-site organisations.

You have the option to generate and use a composite activity metric {FAQ 12.11} to calculate your organisation-level EnPI.

12.11 What is a composite activity metric? How do we calculate a composite metric?

Determining a single organisation-level activity metric {FAQ 12.1} for large or complex organisations can be difficult because different aspects of the organisation's activity consume different amounts of energy (different energy intensities).

In such cases you can develop a *composite* organisation-level activity metric based on more than one sub activity metric. The scale of each sub activity metric's contribution to the overall activity metric is specified by you and should be based on each sub activity metric's share of the overall energy consumption. For example, in this way, a local authority could build a composite activity metric based on the following two sub activity metrics:

- No public lights – weighted at 20%, because 20% of baseline {FAQ 13.12} consumption is used for public lighting;
- Population served (80%).

The equation used for calculating the composite organisation-level activity metric is:

$$Activity_o = \sum_{i=1}^x \left(\frac{Subactivity_i}{Subactivity_{i,Baseline}} \times Weighting_i \times 1,000 \right)$$

Where:

- Each 'Subactivity_i' is an activity metric included in the composite activity metric;
- 'Weighting_i' is a weighting applied to subactivity *i*. The same weightings must be used for each year from the baseline period onwards. The sum of the weightings must equal 1.0.

- 'x' is the total number of subactivities incorporated into the composite activity metric.

Using this approach will give an activity metric for the baseline period equal to 1,000. Note that you can opt to use a composite metric by selecting 'Use other activity metric' in the M&R system and then clicking 'Composite Activity Metric'; you will then be prompted to enter your subactivities and weightings.

This approach is only appropriate for instances where all of the subactivities have been undertaken since the baseline period. If the drivers for energy consumption in your organisation have fundamentally transformed since 2009 - to such an extent that a robust activity metric is impossible – then review this FAQ {FAQ 12.12}.

Public bodies wishing to use a composite activity metric can request an Activity Metric Review {FAQ 12.24} up to two months before the reporting deadline.

12.12 The drivers for energy consumption in our organisation have *fundamentally transformed* since the latest baseline period (2009). What activity metric should we use?

All organisations evolve over time – to a greater or lesser degree. Therefore, you should select an organisation-level activity metric {FAQ 12.1} that accounts for such changes to the main drivers for your energy consumption over time. That is the purpose of a good activity metric.

However, there may be some *very rare* instances in which it is impossible to select a robust metric that is valid for both the baseline period {FAQ 13.12} and the most recent reporting year. This may be because the drivers for energy consumption within the organisation have fundamentally transformed over the period, e.g. the main activity currently undertaken by the organisation was not undertaken during the most recent baseline year (2009). Consider organisation ABC:

In 2009, 100% of ABC's consumption was in its single office building, occupied by a small number of staff. Since the, staff numbers and office size have remained more or less constant. However, its energy consumption has increased dramatically and is now dominated by significant process operations at multiple sites that ABC leases and which are operated on its behalf by contractors. ABC is struggling to pick a good activity metric. Choosing FTE employees or TUFA may be appropriate for the office-based activities but they are not appropriate for the process operations, even if the contractor staff were counted. ABC's process operations can be quantified but they were not undertaken in 2009, so basing the activity metric on these would give an infinite EnPI {FAQ 12.3} value for 2009. For the same reason, using a composite metric {FAQ 12.11} – based on, say, FTE employees and the process operations – would not work.

If your organisation's history is similar to that in the example and you cannot select an activity metric that is valid for both the most recent baseline (2009) and the most recent reporting year *because your energy consumption is now driven predominantly by an activity that was not undertaken in 2009*, then you should contact SEAI setting out your circumstances. SEAI will advise on the development of a bespoke activity metric for your organisation. *SEAI partners should contact their PSM; non-partners should contact mandr@seai.ie.*

If your organisation was not in existence in 2009, then see this FAQ {FAQ 13.25}.

12.13 What is a good activity metric for the electricity EnPI?

From the 2015 reporting cycle onwards, the reporting of an activity metric specifically for electricity is no longer mandatory. It is optional. If you do not report a specific metric for electricity use, the system uses the organisation-level metric to calculate your electricity EnPI.

Different types of organisations use electricity for different purposes. For example, if your organisation's main energy use is in buildings, then most of your electricity use is probably for lighting, IT and, possibly, heating and air conditioning. In this case a good activity metric {FAQ 12.1} might be the number of people that benefit from the energy service provided by the electricity (e.g. FTE employees, FTE students) or else the total useful floor area (TUFA).

On the other hand, other organisations use a lot of electricity for non-building uses. For example, local authorities consume significant amounts of electricity providing public lighting. For these organisations, the best activity metric might also be based on the number of people that benefit from the energy service; however, in this case, this would be measured in terms of population served (e.g. from the most recent census data).

Your organisation might use electricity differently; you should bear this in mind when considering what activity metric to use.

12.14 What is a good activity metric for the thermal fuel EnPI?

From the 2015 reporting cycle onwards, the reporting of an activity metric specifically for thermal energy is no longer mandatory. It is optional. If you do not report a specific metric for thermal use, the system uses the organisation-level metric to calculate your thermal EnPI.

In most public bodies, the vast majority of thermal energy is used for space and water heating. Therefore a good activity metric {FAQ 12.1} is often the number of people that benefit from the heating, e.g. FTE employees, FTE students (education sector). An alternative metric is the total useful floor area (TUFA).

Your organisation might use thermal fuels differently; you should bear this in mind when considering what activity metric to use.

12.15 What is a good activity metric for the transport fuel EnPI?

From the 2015 reporting cycle onwards, the reporting of an activity metric specifically for transport energy is no longer mandatory. It is optional. If you do not report a specific metric for transport use, the system uses the organisation-level metric to calculate your transport EnPI.

Transport fuels are used to transport persons or goods. Therefore, the best activity metrics {FAQ 12.1} for this EnPI {FAQ 12.3} are:

- km-travelled, e.g. for a fleet of cars;
- passenger-km travelled, e.g. for public transport;
- Passenger journeys, e.g. for public transport (but not as good as the above);

- tonne-km travelled, e.g. for freight.

Note: calculating an EnPI {FAQ 12.3} on this basis of these activity metrics is similar to the ‘miles per gallon’ concept.

Your organisation might use transport fuels for more specialist purposes; you should bear this in mind when considering what activity metric to use.

12.16 How important is it to have accurate data for the activity metrics?

Having accurate data is essential for calculating robust EnPIs {FAQ 12.3}. Incomplete or inaccurate activity metric {FAQ 12.1} data can result in misleading conclusions and erroneous decision making.

12.17 How do we calculate activity metrics?

How you calculate your activity metric {FAQ 12.1} is up to you. However, it is essential that you calculate each activity metric in the same way each year. If you do not, then your EnPI(s) {FAQ 12.3} will be distorted. For this reason, you should retain records of your calculation of your activity metrics for each year.

Guidance on how to calculate some specific metrics is available in this FAQ:

- Total useful floor area (TUFA) {FAQ 12.20};
- Full time equivalent (FTE) employees {FAQ 12.19};
- Population served {FAQ 12.21};
- Composite metrics {FAQ 12.11}.

12.18 Why do we have to report our FTE employment and total useful floor area (TUFA)?

These are both metrics favoured by the European Commission for national reporting at sectoral level.

FTE employment is also a metric that is applicable to all public bodies and data for this metric should be relatively straightforward to source. (Note: FTE employment will not be used for like-for-like comparisons of energy performance across the public sector for two main reasons. Firstly, the relationship between energy use and FTE employment varies significantly in different types of public body. Secondly FTE employment may be calculated in slightly different ways in different organisations.)

The floor area metric provides useful data that is relevant for other current and future energy reporting requirements, e.g. Energy Performance in Buildings Directive, future EU requirements for a national inventory of public buildings.

Guidance on how to calculate these metrics is available in this FAQ:

- Total useful floor area (TUFA) {FAQ 12.20};

- Full time equivalent (FTE) employees {FAQ 12.19}.

12.19 How do we calculate our Full Time Equivalent (FTE) employment?

One Full Time Equivalent (FTE) employee corresponds to one full year of work by one person. Your organisation probably has a well established methodology for calculating FTE employment – your HR department/person should be able to give you the relevant FTE employment figures for each year and explain the methodology used.

For the purposes of the energy reporting system, it is important that your organisation submits FTE employment data calculated in the same way every year. If your organisation changes the basis for the FTE employment calculation, then you will need to either:

- Continue to calculate FTE employment data using the 'old' method for the purposes of energy reporting OR;
- Re-submit FTE employment data calculated using the 'new' method for your chosen baseline year(s) {FAQ 13.12} onwards.

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."

12.20 How do we calculate total useful floor area (TUFA)?

This methodology is identical to that used for the calculation of floor area for Display Energy Certificates (DECs) – in compliance with *European Union (Energy Performance of Buildings) Regulations 2012* (SI 243 of 2012).

TUFA should only be calculated for buildings (defined as roofed constructions having walls) in which energy is used to condition the indoor climate, i.e. for which energy is used for space heating, cooling, ventilation etc. Therefore, buildings in which no energy is used for heating, cooling or ventilation should not be included in the TUFA calculation. Once you have calculated the TUFA for each relevant building, you should add the values together to calculate a total organisation-level TUFA in square meters (m²) for your organisation.

Total Useful Floor Area (TUFA) is based on the building area measurement specified in Irish building legislation. This is the same as the Gross Internal Area (GIA) commonly used in commercial property surveying, and for which measurement conventions are based on the SCS/IAVI Measuring Practice Guidance Notes. The method of measurement of total useful floor area is also set out in Technical Guidance Document L of the Building Regulations, which states that 'linear measurements for the calculation of wall, roof and floor areas and building volumes should be taken between the finished internal faces of the appropriate external building elements'.

In this convention:

- The area of sloping surfaces such as staircases, galleries, raked auditoria, and tiered terraces should be taken as their area on plan; and
- Areas that are not enclosed such as open floors, covered ways and balconies are excluded.

Some building sectors commonly use alternative measures of area, notably Net Lettable Area (NLA) for the commercial office sector, and Sales Floor Area (SFA) for retail premises. Where these are the only measurements available for these building types, then the calculation may use standard, conservative, conversion factors to obtain TUFA from NLA or SFA. These conversion factors and the building categories for which they may be applied are as follows:

Category	Brief Description	Approved Alternate Floor Area	Default Multiplier Applied to Alternate Floor Area to Obtain TUFA
General office	General office and commercial working area	Net lettable area (NLA) as measured by Royal Institution of Chartered Surveyors (RICS)	1.25
General retail	General street & retail services	Sales Floor Area (SFA)	1.80
Large non-food shop	Retail warehouse or other large non-food store	Sales Floor Area (SFA)	1.80

Source: SEAI Methodology for the production of Display Energy Certificates (DEC)

The only alternative to using these defined conversion factors is to measure and provide the total useful floor area directly.

12.21 How do we calculate population served?

Population served is the suggested organisation-level activity metric {FAQ 12.1} for local authorities. There is census data available for the population in each individual local authority area for the following years:

- 2002: <http://census.cso.ie/Census/TableViewer/tableView.aspx?ReportId=1129> ('Persons 2002' column). This also has data from the 1996 census.
- 2006: <http://census.cso.ie/Census/TableViewer/tableView.aspx?ReportId=75467>
- 2011: <http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=CDP01&PLanguage=0>
- 2016: <http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=EP001&PLanguage=0>

The following approach should be used to calculate population for the other years:

- 2001: interpolate between the 1996 and 2002 census data assuming a constant rate of change in each of the intervening years;
- 2003, 2004 & 2005: interpolate between the 2002 and 2006 census data assuming a constant rate of change in each of the intervening years;
- 2007, 2008, 2009 & 2010: interpolate between the 2006 and 2011 census data assuming a constant rate of change in each of the intervening years;

- 2012, 2013, 2014 & 2015: project from the 2011 census value for your county using whichever of the following you believe to be most representative for your county (or project forward on the basis of an alternative, *justifiable* figure):
 - The % change in population for your county for 2009-2011 (available from <http://www.cso.ie/px/pxeirestat/Statire/SelectVarVal/Define.asp?maintable=CDP01&PLanguage=0>);
 - For 2012: 2011 population for your county *plus 0.23%*, which is based on the CSO's *preliminary* estimate of change in the national population between the 2011 census and April 2012;
 - For 2013: 2011 population for your county *plus 0.40%*, which is based on the CSO's *preliminary* estimate of change in the national population between the 2011 census and April 2013.
 - For 2014: 2011 population for your county *plus 0.76%*, which is based on the CSO's *preliminary* estimate of change in the national population between the 2011 census and April 2014.
 - For 2015: 2011 population for your county *plus 1.32%*, which is based on the CSO's *preliminary* estimate of change in the national population between the 2011 census and April 2015.

12.22 Can we change the way in which we calculate an activity metric?

Yes, but you will have to re-submit metric data for historical years on the basis of the 'new' calculation methodology.

As organisations and management information systems evolve, public bodies often evolve the way in which they measure key aspects of their activity. If your organisation changes the way that it measures one of the activity metrics {FAQ 12.1} reported annually, then you will have to re-submit valid data for the activity metric using the new calculation method for your chosen baseline year(s) {FAQ 13.12} and every subsequent year. Such resubmissions will be the focus of greater scrutiny in terms of data verification assessment.

12.23 Can we change our activity metric?

Yes. You can change your preferred activity metric {FAQ 12.1} for any of the EnPIs {FAQ 12.3}. However, organisations are strongly encouraged to select activity metrics and stick to them.

If you wish to change the activity metric used, then you will have to re-submit valid data for the new activity metric for your chosen baseline year(s) {FAQ 13.12} and every subsequent year.

Organisations that change activity metrics will be the focus of greater scrutiny in terms of data verification assessment.

12.24 We want to use a different activity metric to the ones suggested by the system. Can SEAI assist with this?

If your organisation chooses a composite activity metric {FAQ 12.11} or an organisation-level activity metric that is not one of the 'standard' options in the M&R system, it is very likely that your activity metric will be scrutinised by SEAI through the DVA process {FAQ 8.2} *after the Reporting Deadline*. While you can take action to correct problematic data after a DVA finding has been issued to you, the DVA finding will still stand for the reporting cycle and, importantly, it will affect how your organisation is listed in SEAI's annual report on public sector energy performance.

Therefore, it is important that your organisation chooses, and reports data for, a robust activity metric before the reporting deadline. Partnership Support Managers are available to advise SEAI partners with respect to the choice of activity metric. SEAI also offers an Activity Metric Review service, as described below.

If you are considering choosing an organisation-level activity metric that is not one of the 'standard' options, you can submit your proposed activity metric for review by SEAI in advance of the reporting deadline, as follows:

- Submit an email with subject 'Activity Metric Review' to MandR@seai.ie. The email should:
 - Include a brief explanation of the rationale for your selection of your proposed activity metric.
 - Outline why you believe it is appropriate for use and its relevance to the key factors that affect energy use in your organisation.
 - Explain how the metric is calculated and how you propose to ensure that it will be calculated in the same way year on year.
 - Include/attach any relevant evidence of your approach.
- The deadline for receipt of requests is 2 February 2018 (TBC). This will allow sufficient time for SEAI to review your proposal, for any follow-up engagement that may be required with you (clarification, additional data etc.) and for you to implement your proposal and/or change your approach after the review has been completed - all well before the reporting deadline.
- SEAI will review the material provided and provide feedback to you on the appropriateness of the proposed activity metric.
- The review is not a DVA and SEAI will not formally 'sign-off' on your implementation of the activity metric for the reporting cycle. SEAI will provide feedback on the consistency of your proposal with the M&R methodologies as they apply to your organisation (based on the information provided) and, if relevant, will make recommendations for improving your approach.

Please note:

- You are free to enter your proposed metric into the system before or during the review process – it is the metric that is in the system at the reporting deadline that is 'counted' by the system.
- You do not have to request a review. It is entirely optional.
- You do not have to use an activity metric that is consistent with the conclusions of the review. However, your submission is less likely to pass a DVA if you don't.

- The review will only focus on the appropriateness of your activity metric; it will not review the accuracy of your activity metric values or the quality of other data submitted.
- If you choose a 'non-standard' activity metric, it is very likely to be selected for DVA, even if the metric has been through the Activity Metric Review process. If your metric has been reviewed, the review file will be shared with the DVA assessor, which should streamline the DVA process in instances where the metric used is consistent with the conclusions of the review.

The following organisations may be interested in this activity metric review service:

- Organisations reporting for the first time and considering the use of a 'non-standard' metric
- Organisations considering changing to a 'non-standard' metric, including those that may be seeking to improve an existing 'non-standard' metric
- Organisations that have failed a DVA because of their choice of activity metric

13 CALCULATING SAVINGS & TRACKING PROGRESS

13.1 How are energy efficiency savings calculated?

It is physically impossible to ‘measure’ energy savings. Therefore, determining energy savings always involves analysing changes in other parameters that are directly related to energy use. The methodology used in this system calculates savings on a top down basis for each organisation.

There are two key reporting indicators calculated for each organisation each year:

- *Primary reporting indicator:* Energy performance indicator (EnPI) {FAQ 13.2};
- *Secondary reporting indicator:* Total primary energy requirement (TPER) {FAQ 13.3}.

13.2 How are energy efficiency savings calculated using the *Primary Reporting Indicator* (EnPI)?

The SEAI system uses energy performance indicators (EnPIs) {FAQ 12.3} 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 {FAQ 12.1} - of the organisation.

Each year, an organisation-level EnPI is calculated by dividing the organisation’s total primary energy requirement (TPER) {FAQ 13.4} by the organisation-level activity metric:

- The TPER 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 (e.g. electricity generation transmission and distribution). The TPER is calculated by applying published conversion factors to each element of the organisation’s energy consumption. There are different conversion factors for electricity and for each of the thermal and transport fuel types. The calculation of TPER is explained here {FAQ 13.6}.
- The activity metric is a measure of the activity that the organisation 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.).

So, an organisation’s year 201X EnPI would be calculated as follows:

$$EnPI_{201X} = \frac{Energy\ Consumption\ (as\ TPER)_{201X}}{Activity\ Metric_{201X}}$$

An organisation’s energy saving (%) between any two periods is calculated as the change in the organisation’s energy performance indicator (EnPI) divided by the EnPI value for the earlier of the two periods. For example, the energy savings made between the baseline {FAQ 13.12} and year 201X are calculated as follows:

$$Savings_{201X} = \frac{EnPI_{Baseline} - EnPI_{201X}}{EnPI_{Baseline}}$$

This methodology accounts for an organisation's energy performance as well as its energy consumption. Energy performance relates energy use to the service or activity output of the organisation. Specific advantages of this approach include:

- Workable because it requires relatively limited data compared to bottom-up approaches;
- Focuses on organisation level performance;
- Avoids the double counting problem (interference between energy saving measures);
- Avoids requirement to demonstrate causality between measures and savings;
- More easily understood than bottom-up approaches;
- More robust than other top-down approaches;
- Consistent with the definitions of 'energy efficiency' and 'energy savings' used by the European Commission;
- Facilitates benchmarking;
- Gives credit to organisations for implementing measures that reduce transformation and system losses at a national level.

13.3 How are energy efficiency savings calculated using the *Secondary Reporting Indicator* (TPER)?

Notwithstanding the many advantages of the EnPI {FAQ 12.3} approach, the European Commission is also considering alternative approaches based on simple changes in total final energy consumption.

Therefore, the *secondary indicator* for tracking each organisation's energy savings is the change in the organisation's energy consumption (as TPER) {FAQ 13.4} each year. Expressed as a percentage savings between the baseline {FAQ 13.12} and year 201X, this is calculated as follows:

$$Savings_{201X} = \frac{TPER_{Baseline} - TPER_{201X}}{TPER_{Baseline}}$$

As the Commission is currently considering different approaches to establishing targets and tracking progress against them, the relative primacy of the two different reporting indicators used by the monitoring & reporting system may evolve over the coming years.

13.4 What is the Total Primary Energy Requirement (TPER)?

Total primary energy requirement or TPER is a measure of all of the energy consumed by the organisation and accounts for the energy that is consumed and/or lost beyond the boundary of the organisation – in energy transformation, transmission and distribution processes, e.g. electricity generation transmission and distribution.

TPER is different from the total final consumption (TFC), which is the energy consumption as recorded or measured at the boundary of the organisation. TFC is recorded on meters and is typically the quantity shown on bills.

An organisation's TFC is essentially its TPER less the quantities of energy required to transform primary sources such as crude oil into forms suitable for end use consumers such as refined oils, electricity etc. Transformation, processing or other losses entailed in delivery to final consumers are known as 'energy overhead'. TPER is calculated by applying conversion factors {FAQ 13.8} to each element of the organisation's TFC.

Public bodies enter data into the system in total final consumption (because this is what is shown on bills and meters) but the monitoring & reporting system tracks performance on the basis of total primary energy requirement (TPER).

The rationale for using TPER is explained here {FAQ 13.5} and the methodology for calculating your organisation's TPER is set out here {FAQ 13.6}.

13.5 Why does the system track savings on the basis of total primary energy requirement (TPER)?

Public bodies enter data into the system in total final consumption (because this is what is shown on bills and meters) but the monitoring & reporting system tracks performance on the basis of total primary energy requirement (TPER) {FAQ 13.4} because:

- TPER gives a more complete measure than total final consumption of the impact of the individual public body and the public sector as a whole on energy use and on energy-related CO₂ emissions;
- The targets set out in the *National Energy Efficiency Action Plan* and in the *European Communities (Energy End-Use Efficiency and Energy Services) Regulations 2009* are in primary energy;
- Monitoring consumption and savings in TPER implicitly gives organisations credit for reducing electricity system losses for 'Ireland Inc.' when they implement certain onsite electricity generation systems, e.g. CHP, auto-generating wind turbines;
- TPER accounts for the inherent higher value of electricity compared to other energy types and it is more closely aligned to the relative costs of different energy types. For example, 1 kWh TFC of electricity typically costs over three times more than 1 kWh TFC of natural gas. In TFC terms, both are counted as 1 kWh. However, in TPER terms the 1 kWh of electricity is counted as 2.39 kWh and the 1 kWh of natural gas is counted as 1.1 kWh (based on 2010 conversion factors).

13.6 How is our organisation's total primary energy requirement (TPER) calculated?

Each public body's total primary energy requirement (TPER) {FAQ 13.4} is calculated every year as follows:

- All reported energy consumption is converted {FAQ 7.10} from the reported units to kilowatt hours on a net calorific value basis. Note that the biofuel components of conventional specification road diesel and petrol {FAQ 16.8} are calculated automatically based on national average blend rates. These are carried forward as separate biofuel sub-totals in the overall calculations.

- The system then adjusts the reported thermal energy consumption for the year to take account of degree day variation from a 25-year average. Degree days give a measure of the effect of the reporting year's temperature on energy requirements. For each day that the average temperature, as recorded at eight different Met Éireann weather stations, is one degree below the designated base temperature (15.5°C), one degree day is accumulated. The calculation applies the weather station specific degree day data to the organisation's geographic 'footprint', which is determined from:
 - The geographic (county) distribution of the organisation's natural gas consumption. This is used for making degree day adjustments to natural gas consumption.
 - The geographic (county) distribution of the organisation's MPRNs that have been self-classified as buildings. This is used for making degree day adjustments to other thermal consumption.
- The system uses the same approach to also adjust a portion of the reported electricity consumption for the year to take account of degree day variation from the 25-year average. The portion adjusted is the percentage of consumption that is reported as being used for space heating. The calculation applies the weather station specific degree day data to the organisation's geographic 'footprint', which is determined from the geographic (county) distribution of the organisation's MPRNs that have been self-classified as buildings. This is used for making degree day adjustments to the electrical space heating consumption.
- The weather adjusted total final consumption for each energy type is then converted to primary energy using conversion factors (see FAQ 13.8). The conversion factors can change from year to year. The conversion factor for electricity is especially prone to change.
- These primary energy values for all of the reported energy types are then added together to calculate the organisation's overall TPER for the year.

This total is referred to as the organisation's TPER.

13.7 Should we adjust our consumption for degree days before reporting?

No. The system automatically adjusts your reported thermal energy consumption, as well as the portion of your electrical consumption reported as being used for space heating, to take account of degree day variation from a 25-year average {FAQ 13.6}.

13.8 What are the conversion factors used to calculate TPER?

TPER {FAQ 13.4} is calculated by applying the following conversion factors to each element of the organisation's total final consumption. The conversion factors can change from year to year. The conversion factor for electricity is especially prone to change.

Energy Type	2015 Primary Energy Conversion Factor: TFC to TPER
Electricity Imports	2.163
Onsite Generation by Non-Fuel Renewables & Landfill Gas	1.00
Offsite Electric Vehicle Charging	2.163
Natural Gas	1.10
LPG	1.10
Biogas	1.00
Kerosene	1.10
Gasoil	1.10
Light, Medium & Heavy Fuel Oils	1.10
Coal	1.10
Manufactured Ovoids	1.20
Sod Peat	1.10
Peat Briquettes	1.10
Wood Chips (35% moisture)	1.10
Wood Pellets	1.10
Wood Briquettes / Logs	1.10
District Heat Imported	1.10
District Heat Exported	1.10
Solar Thermal	1.00
Road Diesel (DERV)	1.10
Petrol	1.10
Marked Diesel (Non-thermal use)	1.10
Jet A1 Kerosene (Aviation)	1.10
Aviation Gasoline (AVGAS)	1.10
Biodiesel	1.10
Bioethanol	1.10

The system uses annual values for primary energy conversion factors from 2001 onwards – these are applied to the reported consumption from the relevant year.

The factors for all thermal and transport fuels have remained unchanged since 2001. However, the conversion factor for electricity has changed over time – as the efficiency of the electricity system has changed. The following is the time series of primary energy conversion factors used in the system for ‘Imported Electricity’.

2001	2002	2003	2004	2005	2006	2007	2008
3.010	2.896	2.750	2.682	2.670	2.566	2.462	2.354
2009	2010	2011	2012	2013	2014	2015	2016
2.332	2.363	2.223	2.289	2.214	2.179	2.113	2.163

SEAI has also prepared a forecast for the primary energy conversion factor for electricity out to 2020. The 2020 value is based on the assumption that Ireland meets its targets as set out in the National Energy Efficiency Action Plan (NEEAP) and in the National Renewable Energy Action Plan (NREEAP). It is also based on all of the macro and price assumptions inherent in SEAI's Energy Forecasts for Ireland publication. The forecast value for the primary energy conversion factor will be reviewed periodically by SEAI.

The forecast and actual values for 'Imported Electricity' are:

	2013	2014	2015	2016	2017	2018	2019	2020
Forecast	2.170	2.132	2.093	2.054	2.016	1.977	1.939	1.900
Actual	2.214	2.179	2.113	2.163				

13.9 How is our organisation's EnPI calculated?

Each year, an organisation-level EnPI {FAQ 12.3} is calculated by dividing the organisation's total primary energy requirement (TPER) {FAQ 13.4} by the self-reported organisation-level activity metric {FAQ 12.1}. So, an organisation's year 201X EnPI is calculated as follows:

$$EnPI_{201X} = \frac{Energy\ Consumption\ (as\ TPER)_{201X}}{Activity\ Metric_{201X}}$$

13.10 How is our organisation's progress to 2020 calculated?

Each public body's progress to 2020 is calculated on the basis of the savings made since the baseline period {FAQ 13.12}, as follows (progress as of year 201X):

$$Savings_{201X} = \frac{EnPI_{Baseline} - EnPI_{201X}}{EnPI_{Baseline}}$$

This is the *primary reporting indicator*.

13.11 What is a normalised EnPI?

Another way of illustrating your organisation's progress uses a normalised EnPI {FAQ 12.3}. This normalisation involves setting your normalised EnPI value in the baseline period {FAQ 13.12} to 100

and quantifying progress since then as movement from this 100 level. The normalised EnPI is calculated as follows (for year 201X):

$$EnPI_N = \frac{EnPI_{201X}}{EnPI_{Baseline}} \times 100$$

There are two key advantages of normalised EnPIs:

- They are useful for publication as they are relatively easily understood to persons outside the organisation and actual energy consumption cannot be derived from them;
- They facilitate *limited* comparison between organisations. However, such comparisons should be made with care. Comparing two organisations' normalised EnPIs is akin to comparing the percentage change in height of two different children over a year – the %s don't tell you how tall (energy efficient) the children (organisations) were at the beginning of the year or the number centimetres grown (kWh saved) over the year. What these metrics do tell you is how the two children (organisations) have performed 'against themselves' since last year.

The calculation of energy savings using EnPIs is explained here {FAQ 13.2}.

13.12 What is the baseline period?

There are several alternative baseline periods. Public bodies can choose whichever of the following baseline periods suits them best:

- 2001-2005 (energy consumption and activity metric {FAQ 12.1} data averaged across these years);
- 2006-2008 (energy consumption and activity metric data averaged across these years);
- 2009 (energy consumption and activity metric data for this single year).

2009 is the default baseline for all (non-school) public bodies.

The 33% target savings target is applied to whichever baseline period is selected by the public body. Therefore, selecting an earlier baseline will enable a public body that has taken early action to benefit from that action by having a shorter distance to target.

13.13 What is the default baseline period?

2009 is the default baseline for the vast majority of (non-school) public bodies, with the exception of public bodies that came into existences after 2008. The default baseline for these organisations is their first full calendar year in existence {FAQ 13.25}

All public bodies must provide energy consumption data and activity metric {FAQ 12.1} data from their baseline period onwards.

13.14 Who selects the baseline?

You do: a public body can select its preferred baseline {FAQ 13.12} option. However, a baseline is only valid upon submission of sufficient valid data for the selected baseline period.

13.15 Why is there a choice of baselines?

More recent baselines are easier to populate with data whereas more historical baselines enable public bodies to take credit for energy saving initiatives undertaken over several years:

- 2009 is a convenient baseline in that it is recent (compared to the alternative baselines) and data should be more readily available. The key legislation was introduced in 2009.
- The baseline period set out in the National Energy Efficiency Action Plan is an average of the period 2001-2005. Using this baseline will enable public bodies to take credit for actions taken since then. However, gathering the baseline data may be more challenging.
- The third baseline period (2006-2008) spans the period between the other two alternatives.

Offering alternatives enables individual public bodies to consider the trade-off between effort (data gathering) and reward (distance to savings target) in the context of their own organisations: for some it will be worthwhile developing a full 2001-2005 baseline; others will opt for the convenience of only providing the 2009 data.

The concept of enabling participants to self-select from alternative baseline periods based on multi-year averages is well established, e.g. in the EU ETS. Using baselines based on averages over several years has the advantage of smoothing out any unrepresentative years in a baseline period. For thermal fuel consumption in particular, the use of a multi-year average baseline has the advantage of taking account of variations in weather conditions over a period of several years.

13.16 What is the impact of baseline selection on our organisation's target?

The 33% savings target is applied to whichever baseline period is selected by the public body. Therefore, selecting an earlier baseline will enable a public body that has taken early action to benefit from that action by having a shorter distance to target.

The table below sets out an example in which it would be worthwhile for a public body with a 33% target which has already improved its energy performance indicator (EnPI) {FAQ 12.3} to obtain robust data for the 2001-2005 period and select this as its baseline.

Baseline	Energy Consumption [kWh TPER {FAQ 13.4}]	Activity Metric {FAQ 12.1}	EnPI	2020 EnPI Target (based on 33% improvement from selected baseline)
2001-2005	100	100	1.0	0.67
2006-2008	130	150	0.866	0.58
2009	100	140	0.714	0.478

The public body's 2009 EnPI is 0.714. If the organisation uses the default baseline (2009), its target EnPI would be 0.478 KWh/unit (a 33% reduction from 2009), whereas its target would be 0.58 if it selects the 2006-2008 baseline (a 19% reduction from 2009) and just 0.67 if it selects the 2001-2005 baseline (a 6% reduction from 2009).

13.17 If we select one of the earlier baselines, do we provide data for each year in the baseline period or do we just report averages for the period?

If you elect to use either the 2001-2005 or 2006-2008 baseline periods {FAQ 13.12}, you must provide data for each of the years in the baseline period. You must also provide data for each year since the baseline.

13.18 How are the averages calculated for the 2001-2005 and 2006-2008 baselines?

For baselines {FAQ 13.12} based on either the 2001-2005 or 2006-2008 periods, the baseline EnPI {FAQ 12.3} is calculated by dividing the average annual energy consumption (as TPER {FAQ 13.4}) by the average annual activity metric {FAQ 12.1} value in the relevant period. These averages are calculated as arithmetic means.

13.19 Can we use one of the earlier two baseline periods if we only report data for some of the years covered by the baseline?

No.

You can only use one of the earlier baseline periods {FAQ 13.12} if you can provide valid and robust data for all of the years covered by the relevant period (inclusive). So, to use the 2001-2005 baseline period, you must report valid data for all of the years 2001 to 2005 inclusive.

13.20 Can we change our baseline period?

Yes. You can change your preferred baseline {FAQ 13.12} to one of the alternatives once sufficient valid data is provided for every year from the new baseline period onwards.

Organisations that change baselines once an initial baseline has been selected will be the focus of greater scrutiny in terms of data verification assessment.

13.21 Can we change the data we submitted for our baseline period?

Yes.

If better data emerges, you can resubmit data for your baseline {FAQ 13.12} at a later date. However, resubmitting baseline data will be the focus of greater scrutiny in terms of data verification assessment.

13.22 Do we have to submit data for every year since the baseline?

Yes. All organisations must submit valid energy consumption and activity metric {FAQ 12.1} data from the start of their baseline period {FAQ 13.12} and for every subsequent year.

13.23 What data do we have to submit for the baseline?

The following data must be submitted to establish a valid baseline {FAQ 13.12} for your organisation:

- Energy consumption data for all energy consumed by the organisation in the baseline period;
- Activity metric {FAQ 12.1} data for the organisation in the baseline period.

13.24 Our organisation recently merged with – or has been subsumed into – another organisation. How should our organisations report?

The current merged organisation should report on behalf of both of the previous yet-to-be-merged entities, including, importantly for all of the years back to the beginning of the preferred baseline period {FAQ 13.12}. The practical guidance for doing so depends on the timing of the merge and whether there is data already in the system for the organisations.

If both organisations are listed here {FAQ 15.4} (in which case two separate letters requesting the organisations to report will have been issued), then:

- You should login to the system using the merged entity's login credentials {FAQ 15.1}, select 'Submit Your 201X Report' -> '(1) Organisation' -> 'Submit request to merge your organisation with another' to submit a merge request to SEAI.
- If one or more of the organisations previously reported data to SEAI, SEAI will merge the data already in the system for both entities, which will entail some direct interaction between an SEAI representative and your organisation to establish an agreed baseline period and a common activity metric {FAQ 12.1}. (It is possible that your two original organisations do not use the same activity metrics and you may have selected different baseline periods. If you cannot provide robust historical data for a merged activity metric (for the organisation-level EnPI {FAQ 12.3}), SEAI will assign a new organisation-level EnPI based on one of the two mandatory activity metrics, i.e. FTE employees or TUFA.)
- You should report data for the merged organisations in the normal way. Historical data for the period prior to the merge must reported as if the yet-to-be-merged entities were a single organisation at the time, i.e. combined energy consumption, combined activity metric. There is no need to report separate figures for the different entities.
- It would be useful if you reported the names of the now-defunct organisation(s) for which you are currently reporting as sub-organisations – see data entry tile (1) {FAQ 15.4}.

If only the merged organisation is listed here {FAQ 15.4} (in which case only one letter requesting the organisation to report will have been issued), then:

- You should simply report data for the merged organisations in the normal way. Historical data for the period prior to the merge must be reported as if the yet-to-be-merged entities were a single organisation at the time, i.e. combined energy consumption, combined activity metric, etc. There is no need to report separate figures for the different entities.
- It would be useful if you reported the names of the now-defunct organisation(s) for which you are currently reporting as sub-organisations – see data entry tile (1) {FAQ 15.4}.

Note: the above guidance applies equally to instances where more than two organisations have merged.

13.25 How are baselines and targets set for new organisations?

The baseline period {FAQ 13.12} for newly established organisations (since 2008) will be the organisation's first full calendar year in existence.

The new organisation's target will be applied from its baseline period. The organisation's target will be calculated on the basis of a constant 'glidepath' of efficiency improvement from 2009 (the default baseline) to 2020. In other words, it will be assumed that had the organisation been in existence since 2009 it would have made a steady 3% improvement in performance each year between 2009 and 2020 ($3\% \times 11 \text{ years} = 33\%$). For example, if a new entrant had a baseline in 2012, its 2020 target would be $8 \times 3\% = 24\%$.

14 TARGETS

14.1 What are the public sector energy efficiency targets?

For the year 2020: “*The public sector will improve its energy efficiency by 33%*” (NEEAP)

14.2 What is meant by an ‘energy efficiency’ target?

The target is an energy efficiency target. Although it will deliver significant CO₂ savings and should stimulate some fuel switching to more sustainable energy sources including renewables, it is not calculated as an emissions or a renewables target.

14.3 What forms of energy come under the targets?

All energy consumption comes under the targets, including energy sourced from electricity, fossil fuels, renewables, transport fuels and fuels used for machinery (e.g. local authority road maintenance machinery).

14.4 Do renewables count towards the target?

All energy consumption must be reported, i.e. both fossil and renewable. Different fuels are reported separately so, from a *reporting* perspective, separate figures are reported for different renewable and fossil fuels. However, they are added together to calculate your organisation’s overall energy consumption (TPER) {FAQ 13.6}.

The savings and targets methodologies are based on *energy efficiency*. Therefore, simply switching fossil consumption to renewable energy consumption does not count as making efficiency savings or as progression towards the target. However, because the system tracks energy efficiency on a primary energy basis, several types of renewable and sustainable energy initiatives will deliver efficiency savings in many cases, e.g. *onsite* non-fuel renewable generators (e.g. wind turbines {FAQ 3.21}), CHP {FAQ 9.6}, landfill gas projects {FAQ 3.23}, etc. *Note: ‘fuel switching’ to less Carbon-intensive energy sources such as renewables can bring several benefits and can contribute to the achievement of renewable energy targets at national level.*

14.5 Do procurement savings count towards the target?

Many organisations can realise valuable financial savings by reducing the unit cost of their energy supplies, through *inter alia* better procurement practices and the elimination of non-energy penalties on electricity bills. While such initiatives are important elements in good energy management practice, they do not save energy *per se* (in terms of kWh); therefore, they do not count towards the target.

14.6 What is the target for our organisation?

All public bodies are assigned a target of a 33% improvement in energy efficiency by 2020.

14.7 What is the target for the different energy users and facilities within our organisation?

It is up to each individual organisation to determine how its organisation-level target can be best achieved in the context of the organisation. The target does not 'trickle down' to specific end users within organisations.

Therefore, in theory, you could meet your target by focussing only on those energy users with greatest potential for savings and undertaking significantly less effort in other areas – as long as the overall savings across the organisation are 33%.

14.8 What does the 33% target mean? How is it applied to our organisation?

Your organisation's overall energy performance indicator (EnPI {FAQ 12.3}) must improve by at least 33% between the baseline period {FAQ 13.12} and 2020. This means that if your baseline organisation-level EnPI {FAQ 13.9} is 100, then your target EnPI (by 2020) is 67 – a 33% improvement. Using this approach ensures that your target is not distorted by changes in the activity level in your organisation.

Expressed mathematically, to achieve the target the following must hold true for your organisation:

$$Savings_{2020} = \frac{EnPI_{Baseline} - EnPI_{2020}}{EnPI_{Baseline}} \geq 33\%$$

Example: if an organisation's baseline energy consumption is 320,000 kWh and its baseline activity metric {FAQ 12.1} is 100 (e.g. 100 FTE employees), then the organisation's baseline EnPI is 3,200 kWh/FTE. The organisation's target is a 33% improvement on its baseline:

$$Savings_{2020} = \frac{3,200 - EnPI_{2020}}{3,200} \geq 33\%$$

Multiplying this out gives:

$$EnPI_{2020} \leq 3,200 - (33\% \times 3,200)$$

$$EnPI_{2020} \leq 2,144$$

So, in this example, to achieve the target the organisation must have reduced its EnPI to 2,144 kWh/FTE or lower by 2020 - a 33% improvement.

14.9 How is our organisation's progress to 2020 calculated?

Each public body's progress to 2020 is calculated on the basis of the savings made since the baseline period {FAQ 13.12}, as follows (example of progress as of year 201X):

$$Savings_{201X} = \frac{EnPI_{Baseline} - EnPI_{201X}}{EnPI_{Baseline}}$$

See FAQs 13.12 to 13.24 for detail on the baseline period.

14.10 Will our organisation be penalised if we have already made savings?

No. You can choose whichever baseline period {FAQ 13.12} suits your organisation best for the initial target. This should incentivise organisations that have taken action over the last decade to choose earlier baselines, because energy saving initiatives that have improved energy efficiency over this period will be 'rewarded' in terms of a shorter distance to target (see FAQ 13.16).

15 USING THE M&R SYSTEM

15.1 How do we access the system?

The secure online M&R system is at <https://psmr.seai.ie/>. Users require a valid user name and password to access the system.

If you do not already have a valid user name and password, you should follow the M&R System Registration instructions at <http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>.

15.2 How do we get a user name and password for the system?

If you do not already have a valid user name and password, you should follow the M&R System Registration instructions at <http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>.

15.3 Can we get multiple user names / logins for our organisation?

Your organisation will be issued with a single login for the system by SEAI. Once you login, you can create additional users for colleagues within your organisation. See the *M&R User Guide* for detailed instructions.

15.4 What is our organisation's PB ID?

The latest list of SEAI public body ID numbers (PB IDs) for all public sector organisations (except individual schools) is shown below. The PB ID is a unique identification number – in the format PB-12345 – assigned to each *public body* by SEAI.

Note that while every effort has been made to develop and maintain a comprehensive database of public bodies, some organisations may be missing from the list. Furthermore, some of those listed may have changed name or merged with others since SEAI updated its records. If your organisation is missing from this list or if you believe that the list should be updated, please email mandr@seai.ie with relevant details.

The list is in alphabetical order.

PB-00001	Abbey Theatre
PB-05124	Ability West
PB-00546	Adelaide and Meath Hospital, Incorporating the National Children's Hospital
PB-00003	Adoption Authority of Ireland
PB-00009	AHEAD
PB-00916	Allied Irish Banks plc
PB-00012	An Bord Pleanála

PB-00533	An Chéim Computer Services Ltd
PB-00016	An Foras Teanga - Foras na Gaeilge
PB-00017	An Foras Teanga – Ulster Scots Agency
PB-00018	An Garda Síochána
PB-00019	An Post
PB-00483	Arts Council
PB-05151	Athlone Education Centre
PB-00022	Athlone Institute of Technology
PB-00026	Bantry Bay Port Company Ltd
PB-00547	Beaumont Hospital
PB-05152	Blackrock Education Centre
PB-00027	Bord Bia
PB-00029	Bord Iascaigh Mhara
PB-00030	Bord na Móna plc
PB-00034	Broadcasting Authority of Ireland
PB-05109	Brothers of Charity Services Ireland
PB-00037	Bus Éireann
PB-05141	Camphill Communities (Ireland)
PB-00548	Cappagh National Orthopaedic Hospital
PB-00038	Carlow County Council
PB-05153	Carrick-on-Shannon Education Centre
PB-05107	Carriglea Cáirde Services
PB-00313	Cavan & Monaghan Education & Training Board
PB-00041	Cavan County Council
PB-00045	Central Bank of Ireland
PB-01076	Central Remedial Clinic
PB-00047	Central Statistics Office
PB-05102	Cheeverstown House
PB-05134	Cheshire Ireland
PB-00051	Chief State Solicitor's Office
PB-05110	Children's Sunshine Home/Laura Lynn
PB-00550	Children's University Hospital
PB-00054	Citizens Information Board
PB-00056	City of Dublin Education & Training Board
PB-00066	Clare County Council
PB-05154	Clare Education Centre

PB-05155	Co. Wexford Education Centre
PB-05116	Cobh Community Hospital
PB-00070	Coillte Teoranta
PB-00076	Commission for Aviation Regulation
PB-00077	Commission for Communication Regulation
PB-00078	Commission for Energy Regulation
PB-00427	Commission for Railway Regulation
PB-05114	Commissioners of Irish Lights
PB-00083	Companies Registration Office & Registrar of Friendly Societies
PB-00331	Competition and Consumer Protection Commission
PB-00552	Coombe Women & Infants University Hospital
PB-05106	Cope Foundation
PB-00086	Cork Airport
PB-00087	Cork City Council
PB-00089	Cork County Council
PB-00093	Cork Education & Training Board
PB-05156	Cork Education Support Centre
PB-00090	Cork Institute of Technology
PB-00189	CORU
PB-00098	Courts Service
PB-00100	Crawford Art Gallery Cork
PB-00134	daa plc
PB-00106	Data Protection Commissioner
PB-05123	Daughters of Charity – Child & Family Services
PB-05122	Daughters of Charity - Intellectual Disability Services
PB-00108	Defence Forces
PB-00109	Dental Council
PB-00111	Department of Agriculture, Food & Marine
PB-00115	Department of Business, Enterprise & Innovation
PB-00545	Department of Children & Youth Affairs
PB-00112	Department of Communications, Climate Action & Environment
PB-00110	Department of Culture, Heritage & the Gaeltacht
PB-00113	Department of Defence
PB-00114	Department of Education & Skills
PB-00121	Department of Employment Affairs & Social Protection
PB-00117	Department of Finance

PB-00118	Department of Foreign Affairs & Trade
PB-00119	Department of Health
PB-00116	Department of Housing, Planning & Local Government
PB-00120	Department of Justice & Equality
PB-00544	Department of Public Expenditure and Reform
PB-00122	Department of the Taoiseach
PB-00124	Department of Transport, Tourism & Sport
PB-00099	Design & Crafts Council of Ireland
PB-00125	Digital Hub Development Agency
PB-00128	Donegal County Council
PB-00131	Donegal Education & Training Board
PB-05157	Donegal Education Centre
PB-00130	Donegal Regional Airport
PB-00132	Drogheda Port Company
PB-05158	Drumcondra Education Centre
PB-00149	Dublin & Dún Laoghaire Education & Training Board
PB-00036	Dublin Bus
PB-00135	Dublin City Council
PB-00137	Dublin City University
PB-00138	Dublin Dental Hospital & School
PB-00140	Dublin Institute for Advanced Studies
PB-00141	Dublin Institute of Technology
PB-00142	Dublin Port Company
PB-05159	Dublin West Education Centre
PB-00147	Dun Laoghaire Harbour Company
PB-00148	Dún Laoghaire Institute of Art, Design & Technology
PB-00150	Dún Laoghaire-Rathdown County Council
PB-00152	Dundalk Institute of Technology
PB-00153	Economic and Social Research Institute (ESRI)
PB-05160	Education Centre Tralee
PB-00155	EirGrid Plc
PB-00156	Electricity Supply Board
PB-05132	Enable Ireland
PB-00158	Enterprise Ireland
PB-00159	Environmental Protection Agency
PB-00028	Ervia (Shared Services)

PB-00162	Fáilte Ireland
PB-00911	Financial Services Ombudsman
PB-00168	Fingal County Council
PB-05147	FOLD Ireland
PB-00171	Food Safety Authority of Ireland
PB-00174	Forensic Science Laboratory
PB-00177	Foyle, Carlingford and Irish Lights Commission
PB-00179	Galway City Council
PB-00181	Galway County Council
PB-05161	Galway Education Centre
PB-00183	Galway Mayo Institute of Technology
PB-00095	Galway Roscommon Education & Training Board
PB-00184	Garda Inspectorate
PB-00185	Garda Ombudsman Commission
PB-05121	Gas Networks Ireland
PB-05126	Good Shepherd Services
PB-00188	Grangegorman Development Agency
PB-00190	Health & Safety Authority
PB-00239	Health Products Regulatory Authority
PB-00197	Heritage Council
PB-00199	Higher Education Authority Irish Research Council
PB-00200	Horseracing Ireland Ltd
PB-00201	Houses of the Oireachtas Service
PB-00202	Housing Finance Agency
PB-00196	HSE
PB-00204	Iarnród Éireann / Irish Rail
PB-00205	IDA Ireland
PB-00553	Incorporated Orthopaedic Hospital of Ireland
PB-00209	Inishowen Development Partnership
PB-00210	InjuriesBoard.ie
PB-00046	Inland Fisheries Ireland
PB-00211	Inspector of Prisons and Places of Detention
PB-00212	Institute of Public Administration
PB-00213	Institute of Technology Blanchardstown
PB-00214	Institute of Technology Carlow
PB-00215	Institute of Technology Sligo

PB-00216	Institute of Technology Tallaght
PB-00217	Institute of Technology Tralee
PB-00221	InterTradelreland
PB-00226	Irish Aviation Authority
PB-00917	Irish Bank Resolution Corporation Limited
PB-00227	Irish Blood Transfusion Service
PB-00230	Irish Film Classification Office
PB-00232	Irish Greyhound Board / Bord na gCon
PB-00203	Irish Human Rights & Equality Commission
PB-00415	Irish Prison Service
PB-05105	Irish Water
PB-00247	Irish Water Safety
PB-05133	Irish Wheelchair Association
PB-05119	KARE
PB-00249	Kerry County Council
PB-00250	Kerry Education & Training Board
PB-00526	Kildare & Wicklow Education & Training Board
PB-00254	Kildare County Council
PB-05162	Kildare Education Centre
PB-00259	Kilkenny & Carlow Education & Training Board
PB-00257	Kilkenny County Council
PB-05163	Kilkenny Education Centre
PB-00262	Labour Court
PB-00379	Laois & Offaly Education & Training Board
PB-00264	Laois County Council
PB-05164	Laois Education Centre
PB-00267	Law Reform Commission
PB-00268	Léargas - The Exchange Bureau
PB-00269	Legal Aid Board
PB-00270	Leitrim County Council
PB-00554	Leopardstown Park Hospital
PB-00273	Letterkenny Institute of Technology
PB-00096	Limerick & Clare Education & Training Board
PB-00277	Limerick City & County Council
PB-05165	Limerick Education Centre
PB-00279	Limerick Institute of Technology

PB-00283	Local Government Management Agency
PB-00519	Longford & Westmeath Education & Training Board
PB-00286	Longford County Council
PB-00301	Louth & Meath Education & Training Board
PB-00289	Louth County Council
PB-00292	Marine Institute
PB-00294	Mary Immaculate College Limerick
PB-00571	Marymount University Hospital and Hospice
PB-00555	Mater Misericordiae University Hospital
PB-00369	Maynooth University, NUIM
PB-00296	Mayo County Council
PB-05166	Mayo Education Centre
PB-00298	Mayo Sligo & Leitrim Education & Training Board
PB-00299	Meath County Council
PB-00303	Medical Bureau of Road Safety
PB-00305	Mental Health Commission
PB-00556	Mercy Hospital
PB-00306	Met Éireann
PB-05120	Milford Care Centre
PB-00311	Monaghan County Council
PB-05167	Monaghan Education Centre
PB-05111	Muiriosa Foundation
PB-00317	National Archives
PB-00322	National Cancer Registry Board
PB-00328	National College of Art and Design
PB-00333	National Council for Special Education
PB-00338	National Disability Authority
PB-00340	National Economic and Social Development Office
PB-00346	National Gallery
PB-05137	National Learning Network Ltd.
PB-00349	National Library of Ireland
PB-00557	National Maternity Hospital
PB-00350	National Milk Agency
PB-00351	National Museum of Ireland
PB-00352	National Oil Reserves Agency
PB-00558	National Rehabilitation Hospital

PB-00364	National Transport Authority
PB-00366	National Treasury Management Agency
PB-00367	National Treatment Purchase Fund
PB-00368	National University of Ireland, Galway
PB-05168	Navan Education Centre
PB-00332	NCCA (National Council for Curriculum and Assessment)
PB-00372	New Ross Port Company
PB-00031	Northern & Western Regional Assembly
PB-00361	NSAI
PB-05144	Nua Healthcare Services
PB-00011	Nursing and Midwifery Board of Ireland
PB-00377	Offaly County Council
PB-00381	Office of Public Works
PB-00023	Office of the Attorney General
PB-00385	Office of the Comptroller & Auditor General
PB-00388	Office of the Director of Corporate Enforcement
PB-00389	Office of the Director of Public Prosecutions
PB-00391	Office of the Ombudsman
PB-00395	Office of the Ombudsman for Children
PB-00396	Office of the Ombudsman for the Defence Forces
PB-00015	Oifig an Choimisinéara Teanga
PB-00402	Ordnance Survey Ireland
PB-00560	Our Lady's Children's Hospital Crumlin
PB-00559	Our Lady's Hospice Harold's Cross Limited
PB-05113	Peamount Hospital Newcastle
PB-00918	Permanent TSB
PB-00407	Port of Cork Company
PB-00182	Port of Galway
PB-00408	Port of Waterford Company
PB-00411	Pre-Hospital Emergency Care Council
PB-00412	President's Establishment
PB-00418	Private Security Authority
PB-00419	Probation Service agency of Dept of Justice & Equality
PB-00320	Professional Development Service for Teachers
PB-00356	Property Service Regulatory Authority
PB-00421	Public Appointment Service

PB-00357	Quality and Qualifications Ireland
PB-00423	Raidió Teilifís Éireann
PB-05172	Regulator of the National Lottery
PB-05131	RehabCare
PB-00416	Residential Tenancies Board
PB-00399	Revenue Commissioners
PB-00435	Road Safety Authority
PB-00436	Roscommon County Council
PB-00561	Rotunda Hospital
PB-00441	Royal College of Surgeons in Ireland
PB-00562	Royal Hospital
PB-00439	Royal Irish Academy
PB-00440	Royal Irish Academy of Music
PB-00563	Royal Victoria Eye and Ear Hospital
PB-00172	safefood
PB-05112	Saint John of God Community Services Limited
PB-00444	Science Foundation Ireland
PB-05115	Sea Fisheries Administration Division
PB-00445	Sea Fisheries Protection Authority
PB-00448	Shannon Airport Authority DAC.
PB-00450	Shannon Commercial Properties
PB-00451	Shannon Foynes Port Company
PB-00453	Sligo County Council
PB-05169	Sligo Education Centre
PB-05101	SOLAS
PB-05145	SOS Kilkenny Ltd.
PB-00459	South Dublin County Council
PB-00564	South Infirmary - Victoria Hospital
PB-00910	Southern Regional Assembly
PB-00469	Special EU Programmes Body
PB-00491	Sport Ireland
PB-05117	St Josephs Foundation
PB-00470	St. Angela's College Sligo
PB-05143	St. Catherine's Association Ltd.
PB-05140	St. Christopher's Services Ltd.
PB-05129	St. Cronan's Association CLG

PB-00565	St. Francis Hospice
PB-00566	St. James's Hospital
PB-00567	St. John's Hospital
PB-00570	St. Michael's Hospital
PB-00569	St. Michael's House
PB-05108	St. Patrick's Centre Kilkenny
PB-00572	St. Vincent's Hospital Fairview
PB-00573	St. Vincent's University Hospital
PB-00474	State Examinations Commission
PB-00475	State Laboratory
PB-00912	Stewarts Care Ltd
PB-05135	Sunbeam House Services
PB-00479	Sustainable Energy Authority of Ireland
PB-00480	Teaching Council
PB-00481	Teagasc
PB-00482	TG4
PB-05128	The Bessborough Centre
PB-00192	The Health Information & Quality Authority (HIQA)
PB-00193	The Health Insurance Authority
PB-00195	The Health Research Board
PB-05100	The Insolvency Service of Ireland
PB-00486	The Irish Film Board
PB-00240	The Irish Museum of Modern Art
PB-00238	The Medical Council
PB-00330	The National Concert Hall
PB-00488	The Pensions Board
PB-00406	The Pharmaceutical Society of Ireland - The Pharmacy Regulator
PB-00420	The Property Registration Authority
PB-00374	Tipperary County Council
PB-00494	Tipperary Education & Training Board
PB-00496	Tourism Ireland
PB-00426	Transport Infrastructure Ireland
PB-00498	Trinity College Dublin
PB-00499	Údarás na Gaeltachta
PB-00500	University College Cork
PB-00501	University College Dublin

PB-00502	University of Limerick
PB-00503	Valuation Office
PB-00504	Valuation Tribunal
PB-00505	Voluntary Health Insurance Board
PB-00097	Waterford & Wexford Education & Training Board
PB-00506	Waterford City & County Council
PB-00510	Waterford Institute of Technology
PB-05170	Waterford Teachers' Centre
PB-00511	Waterways Ireland
PB-05171	West Cork Education Centre
PB-05118	Western Care Association
PB-00515	Western Development Commission
PB-00517	Westmeath County Council
PB-00521	Wexford County Council
PB-00524	Wicklow County Council
PB-00263	Workplace Relations Commission

15.5 What are the arrangements for reporting in 2018?

All public bodies are required to report data in late 2017 / early 2018. This is referred to as the *2017 Reporting Cycle*.

The reporting cycle is based on a set of key milestones with corresponding deadlines. The deadlines are set out at <http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>.

15.6 We have previously reported data to SEAI through the M&R project. Do we have to resubmit the data we submitted already?

No. If yours is one of the many public bodies that submitted data during the last reporting cycle, then the data you previously reported is already in the M&R system. This year, you will need to report data for 2016 and, if appropriate, add additional historical data to fill any data gaps in your previous submissions. You will also need to validate {FAQ 18.5} your MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} for *all relevant years*.

You can edit any of the data you previously submitted and you can even change your baseline period {FAQ 13.12} if you want to, as long as you report sufficient historical data to complete your baseline.

15.7 Data entry tile (1): How do we report information on our organisation?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(1) Organisation'.

There are three parts to step 1:

- Enter details of your organisation, for the lead contact for energy reporting and for alternative contact person(s). *Note: The name of the organisation as entered by you here will be the version of the organisation name published by SEAI.*
- Enter the names and home office addresses of any organisations under the aegis of your organisation for which you are reporting as part of your organisation's report. See FAQ 6.1 for additional information on this.

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.8 Data entry tile (2): How do we choose our baseline?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(2) Baseline & Activity Metrics'.

Select your preferred baseline period {FAQ 13.12} from the three options on the drop-down menu. You can choose whichever period suits your organisation best. Remember:

- You must submit a full set of activity metric {FAQ 12.1} and energy consumption data for each year from your baseline period onwards;
- Your energy efficiency target of 33% by 2020 is applied from your baseline period {FAQ 13.16}.

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.9 Data entry tile (2): How do we choose our activity metrics?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(2) Baseline & Activity Metrics'.

An activity metric {FAQ 12.1} is a measure of the activity that your organisation undertakes. Activity metrics are required to determine your organisation's energy performance by calculating an energy performance indicator (EnPI {FAQ 12.3}).

- Select an activity metric for each of the following Energy Performance Indicators (EnPIs):
 - Organisational: The organisation-level activity metric will be used to track your organisation's progress against its target {FAQ 14.8}.
 - Electricity
 - Thermal
 - Transport

See FAQ section 12 for FAQs on activity metrics.

- You can also apply to use a different (unlisted) activity metric by:
 - Selecting 'Use other activity metric';
 - Specifying the activity metric;
 - Explaining the rationale for this.
- You can select the same activity metric as the basis for more than one EnPI.
- If your organisation does not consume energy in one of the categories, then select 'No Consumption'.
- You will have to report data for each of the chosen activity metrics for each year from your chosen baseline period {FAQ 13.12} onwards.

The [M&R User Guide](#) contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.10 Data entry tile (2): How do we report our activity metric values?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(2) Baseline & Activity Metrics'.

Enter data for each of the activity metric {FAQ 12.1} for every year from your baseline period {FAQ 13.12} onwards. Note:

- All organisations must report data for FTE employees and Total Useful Floor Area {FAQ 12.18};
- The values entered for all metrics must be calculated in the same way for each year;

You can (optionally) enter a brief summary of why your activity metrics data may have changed over time.

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.11 Data entry tile (3): How do we select the energy types that we use?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(3) Energy Usage'.

You must select the energy types before you can report consumption for them. Once selected, your energy types remain selected from year to year, i.e. there is no need to select your energy types every year – you just need to add any new energy types that your organisation has started using over the previous year.

Select your energy types by clicking 'Select (Update) the energy types you use' and then clicking the relevant check boxes. The energy types {FAQ 7.5} are broken into categories. If you point your cursor at an energy type, a brief description of the energy type will appear. There is extensive

guidance on identifying & understanding what energy types you use in this FAQ {FAQ 16}. To select an energy type that is not listed, use the 'Add Other Energy Type' function {FAQ 15.15}.

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.12 Data entry tile (3): How do we report our electricity consumption?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(3) Energy Usage'.

There are four key steps:

1. **Select your energy types** by clicking 'Select (Update) the energy types you use' and then selecting:
 - 'Net Electricity Imports (MPRN data)' to enable the system to access the consumption attributable to the MPRNs that you enter into the system. Note, however, that this data is only available from 2006 onwards, so if you have chosen the 2001-2005 baseline period {FAQ 13.12} you will also need to select 'Net Electricity Imports (non-MPRN data)' (see below).
 - 'Net Electricity Imports (non-MPRN data)' to self-report some or all of your electricity consumption. You may wish to select this option because you cannot provide validated MPRNs for some or all of your consumption. You must select this if you have chosen the 2001-2005 baseline.
 - 'Onsite Generation by Non-Fuel Renewables or Landfill Gas' {FAQ 9.7}.
 - 'Offsite Charging of Electric Vehicles' if your organisation charges electric vehicles offsite, e.g. electricity from on street charge stations or fuel station fast charging points.
2. **Enter/review and validate your MPRNs** by clicking 'Enter/update your MPRN data' and then:
 - Reviewing the MPRNs in the system (if any) and editing specific fields as required – by either clicking on the field and typing your edits or clicking on the MPRN itself and editing via the box that appears.
 - Adding any additional MPRNs by clicking 'Add Meter'.
 - Entering the % attributable consumption for each meter for relevant years. If your organisation was an attributed consumer {FAQ 18.5} for the MPRN in the relevant year and the If this MPRN was *not* shared with another organisation in this year, then enter 100%. If your organisation shared the MPRN with other organisation(s) during this year, then estimate the % of the consumption through that meter that is attributable to your organisation.
 - Deleting any MPRNs through which your organisation has not consumed any energy at any time since the beginning of your baseline. **Note that you should not delete MPRNs through which you do not currently consume energy, but which were live at some other time since the beginning of your baseline (or vice versa). In these situations you should set the validation status of the MPRN to 'Not Validated' for the years in which you did not consume energy through the meter.**

- Validating your MPRNs. The rationale for validating MPRNs and a detailed explanation of the validation options is set out here {FAQ 18.5}. You need to validate your MPRNs for each year. **Non-validated MPRNs will not be processed by the system.**
 - Note that you can filter and tag your MPRNs to help you manage your MPRNs. See the *M&R User Guide* for instructions.
3. **Report your annual consumption** for non MPRN electricity (if you have selected any of the last three electricity ‘types’ listed in step 1 above) by clicking ‘Enter your energy consumption’ or the right arrow beside the relevant energy type listed on the tile. Then simply enter the *annual consumption values at organisation level* in kWh. **Take particular care not to report any consumption that will also be captured via your validated MPRNs. Otherwise your consumption will be double counted, which could significantly distort your organisation’s apparent performance.**
 4. **Report the % of electricity used for space heating** {FAQ 9.11} by clicking ‘Enter your energy consumption’ and then entering the percentage on the last row.

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.13 Data entry tile (3): How do we report our natural gas consumption?

To enter this data, you should select ‘Submit Your 2016 Report’ and then use the tile labelled ‘(3) Energy Usage’.

There are three key steps:

1. **Select your energy types** by clicking ‘Select (Update) the energy types you use’ and then selecting:
 - ‘Natural Gas (GPRN data)’ to enable the system to access the consumption attributable to the GPRNs that you enter into the system. Note, however, that this data is only available from 2006 onwards, so if you have chosen the 2001-2005 baseline period {FAQ 13.12} you will also need to select ‘Natural Gas (non-GPRN data)’ (see below).
 - ‘Natural Gas (non-GPRN data)’ to self-report some or all of your natural gas consumption. You may wish to select this option because you cannot provide validated GPRNs for some or all of your consumption. You must select this if you have chosen the 2001-2005 baseline.
2. **Enter/review and validate your GPRNs** by clicking ‘Enter/update your GPRN data’ and then:
 - Reviewing the GPRNs in the system (if any) and editing specific fields as required – by either clicking on the field and typing your edits or clicking on the GPRN itself and editing via the box that appears.
 - Adding any additional GPRNs by clicking ‘Add Meter’.
 - Entering the % attributable consumption for each meter for relevant years. If your organisation was an attributed consumer {FAQ 18.5} for the GPRN in the relevant year and the If this GPRN was *not* shared with another organisation in this year, then enter 100%. If your organisation shared the GPRN with other organisation(s) during this year, then estimate the % of the consumption through that meter that is attributable to your organisation.

- Deleting any GPRNs through which your organisation has not consumed any energy at any time since the beginning of your baseline. **Note that you should not delete GPRNs through which you do not currently consume energy, but which were live at some other time since the beginning of your baseline (or vice versa). In these situations you should set the validation status of the GPRN to 'Not Validated' for the years in which you did not consume energy through the meter.**
 - Validating your GPRNs. The rationale for validating GPRNs and a detailed explanation of the validation options is set out here {FAQ 18.5}. You need to validate your GPRNs for each year. **Non-validated GPRNs will not be processed by the system.**
 - Note that you can filter and tag your GPRNs to help you manage your GPRNs. See the *M&R User Guide* for instructions.
3. **Report your annual consumption** for non GPRN natural gas consumption (if you have selected this energy 'type') by clicking 'Enter your energy consumption' or the right arrow beside 'Natural Gas (non-GPRN data)' on the tile. Then simply enter the *annual consumption* values *at organisation level* in kWh. **Take particular care not to report any consumption that will also be captured via your validated GPRNs. Otherwise your consumption will be double counted, which could significantly distort your organisation's apparent performance.**

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.14 Data entry tile (3): How do we report our non-network-connected energy consumption?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(3) Energy Usage'. In the context of this system, non-network-connected energy supplies refer to all energy supplies that are not network connected, i.e. all energy types except natural gas and electricity.

There are two key steps:

1. **Select your energy types** by clicking 'Select (Update) the energy types you use' and then clicking the relevant check boxes. The energy types {FAQ 7.5} are broken into categories. If you point your cursor at an energy type, a brief description of the energy type will appear. There is extensive guidance on identifying & understanding what energy types you use in this FAQ {FAQ 16}. To select an energy type that is not listed, use the 'Add Other Energy Type' function {FAQ 15.15}.
2. **Report your annual consumption** by clicking 'Enter your energy consumption' or the right arrow beside any of the energy types listed on the tile. Then simply enter the annual consumption values at organisation level in the units shown. **It is imperative that you enter the values in the units shown; otherwise, your data could significantly distort your organisation's apparent performance.**

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.15 Data entry tile (3): We use a fuel/energy type that is not listed in the system. How do we report this consumption?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(3) Energy Usage'.

The system has been designed to accommodate all energy types used in the public sector. However, to facilitate ease of use, some uncommon energy types have not been included. In the unlikely event that an energy type that your organisation uses is not included in the reporting template, you should:

- Double check that your fuel/energy type is not the same as one of the energy types included in the reporting template. For example, some oil products and some solid fuel fuels have many different alternative names – many of these alternatives are included in the hover-over help in the system.
- If you are sure that you need to add a new energy type, click 'Select (Update) the energy types you use' and then 'Add Other Energy Type'. You will then be prompted to enter several items of data for this 'new' energy type, including:
 - Name of the energy type;
 - The reporting units;
 - The conversion factor from the reporting units to kilowatt-hours (kWh) – on a net calorific basis;
 - The CO₂ emission factor for the energy in kgCO₂/kWh;
 - The primary energy conversion factor – refer to the list of conversion factors {FAQ 13.8} for the 'standard' energy types for factors for similar fuels;

It is imperative that you enter the conversion factors in the correct units; otherwise, your data could significantly distort your organisation's apparent performance.

- You will then need to report your consumption of this energy type in the normal way {FAQ 15.14} (step 2).

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.16 We use biofuels for heating. How do we report this consumption?

You should report biofuels used for non-transport purposes (e.g. in boilers) using the 'Add Other Energy Type' function {FAQ 15.15}.

15.17 We use waste as a source of energy – how should we report this?

If you use waste for energy generation (thermal or electricity generation) *at one of your facilities*, you should report this consumption using the 'Add Other Energy Type' function {FAQ 15.15}.

Waste that is thermally treated – or incinerated – offsite should not be reported {FAQ 3.24}.

**15.18 Data entry tile (3): There are MPRNs / GPRNs shown that we did not submit to SEAI.
Where did these come from?**

Both the energy suppliers and the National Procurement Service submitted MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} to SEAI for public bodies. Any 'additional' MPRNs and GPRNs from these sources have been added to those that your organisation may have submitted since 2010. You can update or delete all of the MPRNs and GPRNs shown for your organisation.

15.19 Data entry tile (3): How do we delete MPRNs (or GPRNs) from the system?

You should only delete an MPRN (or GPRN) from the system if it was never one of your organisation's MPRNs (or GPRNs) at any time since the beginning of your baseline period {FAQ 13.12}. If this is the case you should simply delete the row using the 'delete' button on the left hand side. If an MPRN (or GPRN) no longer 'belongs' to your organisations but it was used by your organisation at some stage since the beginning of your baseline period (or vice versa), then you should set the validation status of the MPRN (or GPRN) to 'Not Validated' for the relevant year(s).

15.20 Data entry tile (4): How do we report our project data?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(4) Energy Saving Projects'.

You can click 'Update Projects' to review projects that you have previously reported; you can edit these by clicking on relevant fields.

To add a 'new' project that either been implemented already {FAQ 15.21} or that is planned, click 'Add project'. You will then be prompted to enter the following data:

- Project name;
- Location of facilities at which project was (/will be) implemented;
- Implementation year;
- Status – planned or complete;
- Basis for reporting energy savings (total savings or broken down by electricity, thermal, transport) – see guidance on reporting savings from groups of projects {FAQ 15.23};
- Energy savings attributable to the project in kilowatt-hours (kWh);
- Estimated duration of savings (years);
- Project type & sub-type (select from menus);
- Indicate whether the project used Triple E equipment. If the project involved the procurement of equipment or vehicles, were the equipment or vehicles used either classified as Triple E by SEAI {http://www.seai.ie/Your_Business/Triple_E_Product_Register/} or did they meet the energy efficiency criteria published by SEAI for relevant product categories?

- Approach / methodology used (/proposed for use) to verify savings {FAQ 15.22} (select from menu);
- Indicate whether SEAI can use it as the basis for a mini case study (for publication);
- Comments (Optional).

The *M&R User Guide* contains additional technical guidance on how to input, edit, delete and manipulate data items with the software.

15.21 Data entry tile (4): How far back can we go with our energy savings project list?

Generally you can enter details for projects implemented as far back as your baseline period {FAQ 13.12}. However, if projects implemented before this period are still generating energy savings for your organisation, you can also include them.

15.22 Data entry tile (4): Why do we have to report a ‘verification methodology’? What are the reporting options?

To enter this data, you should select ‘Submit Your 2016 Report’ and then use the tile labelled ‘(4) Energy Saving Projects’.

Measurement and verification (M&V) is the process of using measurement to reliably determine the actual savings achieved within a facility by an energy management project/projects. It is an important element of effective energy management because projects do not always yield the level of savings that are anticipated prior to implementation.

You can select one of the following verification methodologies (listed in descending order of robustness) for the projects that you report:

- ‘IPMVP or equivalent’: the International Performance Measurement and Verification Protocol (IPMVP), developed by the Efficiency Valuation Organisation (EVO), is an internationally referenced framework that is used to ‘measure’ energy (or water) savings. As savings cannot be directly measured, savings are calculated by comparing measured consumption before and after project implementation.
- ‘Retrospective analysis of savings’: an analysis of relevant energy consumption data *undertaken after project implementation* - to calculate the savings attributable to the project(s), but the analysis did not use the formal IPMVP or equivalent framework.
- ‘Projected savings’: an analysis of relevant energy consumption and other data *undertaken before project implementation* - to calculate the projected savings.
- ‘None’: No verification undertaken – the value(s) entered for energy savings are estimates based on professional judgement alone.

15.23 Data entry tile (4): We have undertaken a suite of energy efficiency projects at a single facility. Should we report this as a single project or as several smaller projects?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(4) Energy Saving Projects'.

If you have implemented a suite of energy efficiency projects at a facility, you have two options with respect to reporting the projects:

- Preferred option: report each sub-project as a separate entry complete with quantified energy savings for each individual sub-project;
- Alternative option: report the entire suite of projects as a single entry, complete with quantified energy savings for the overall suite of projects.

If, for example, you have insufficient data to report using the preferred option, you can use the alternative option, which requires less data. If you have sufficient data to report using the preferred option, then please use this option.

Importantly, however, the savings reported must match the suite of projects/sub-project as you have described them/it. Be careful not to double count any reported savings, e.g. by reporting the total savings attributable to a suite of projects more than once for separately reported sub-projects.

15.24 Data entry tile (5): How do we report on 'Exemplar Energy Management'?

To enter this data, you should select 'Submit Your 2016 Report' and then use the tile labelled '(5) Exemplar Energy Management'.

There are five aspects to this:

1. Include an overall **comment on your 201X energy performance**.
2. Describe the **completeness** {FAQ 8.13} **of the energy data** you have reported (from drop-down menu).
3. Describe the **completeness** {FAQ 8.13} of the **activity metric** {FAQ 12.1} data you have reported (from drop-down menu).
4. Select up to **5 factors that led to savings** in the reporting year (from drop-down menus). These measures will be included in the report to be published by SEAI {FAQ 15.35}.
5. Answer the questions relating to any **formal assessments** your organisation may have undertaken over the year on your energy management programme. SI 542 of 2009 sets out several obligations on public bodies with respect to their "exemplary role" for energy efficiency. SEAI's Public Sector Programme {FAQ 21.3} provides tailored advice in this area.

15.25 What is the scorecard?

An energy performance scorecard can provide a visually appealing insight into the energy performance of an organisation. The M&R scorecard communicates important energy metrics to your organisation. The scorecard includes:

- Your savings since your baseline period {FAQ 13.12} and your progress towards the 2020 target;
- Your organisation-level EnPI {FAQ 12.3} for the most recent year and data on how this has changed since the previous year and how it compares to the target;
- Your level-2 EnPIs (electricity, thermal and transport);
- Graphical representation of your EnPI over time and how it compares to the 2020 target 'glidepath';
- Graphical summary of your organisation's energy consumption over time;
- Benchmarking of your progress towards 2020 compared to other public bodies.

Note: the scorecard can only be meaningfully used when all of your consumption data is entered. For this reason, it will not account for the most recent year's data until after the electricity and natural gas consumption data has been sourced from the meter operators and uploaded to the system – see the Provisional Scorecard Date.

15.26 How do we submit our data?

Red warning signs (exclamation marks in red triangles) on the 'Your 2016 Report' page will highlight to you any aspects of your report that are incomplete. When these warnings have been replaced by large green ticks on all five tiles, you have entered data in all of the mandatory fields.

The data that is in the system by the *Reporting Deadline* {FAQ 15.29} is automatically submitted to SEAI. Similarly, MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} that are in the system by the *MPRN & GPRN Deadline* {FAQ 15.28} are automatically submitted to SEAI.

15.27 When are the key reporting milestones, dates & deadlines?

The reporting cycle is based on the key milestones set out below. The dates corresponding to these milestones for the current reporting cycle are available at <http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>.

Reporting Window Open Date	Public bodies can enter data into the system from this date.
MPRN & GPRN Deadline	<u>This is the deadline for submitting & validating {FAQ 18.5} MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2}.</u> Non-validated MPRNs / GPRNs or meter numbers entered after this date will not be processed for this reporting cycle {FAQ 18.8}.
Provisional Scorecard Date	<i>Provisional</i> scorecards will be available via the online system from this date – for organisations that submitted sufficient data to generate a scorecard.
Reporting Deadline	This is the deadline for the receipt of data for the reporting cycle. <u>The system will not accept late submissions beyond this deadline.</u> The data submitted by this date will be that scrutinised via the data verification assessment process.
Final Scorecard Date	<i>Final</i> scorecards will be available via the online system from this date – for organisations that submitted sufficient data to generate a scorecard.

15.28 What happens if we miss the MPRN & GPRN Deadline?

Any MPRNs / GPRNs submitted after the *MPRN & GPRN Deadline* will not be issued to the meter operators (why?{FAQ 18.8}). The energy consumption for these MPRNs / GPRNs will not be counted in your report. In such instances you should self-report the shortfall in consumption for the relevant years.

Details of the timing of the milestone dates is available at <http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>.

15.29 What happens if we miss the *Reporting Deadline*?

The system will not accept submissions after the *Reporting Deadline*. Public bodies that have not reported will be listed accordingly in the SEAI report to be published following the end of the reporting cycle.

Details of the timing of the milestone dates is available at <http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>.

15.30 What if we make a mistake in the data we submit?

There will be opportunity to review all of your data again next year. If you need to change anything then, you will be able to do so.

15.31 We have data in our own spreadsheets. Can we submit the data to SEAI in this format?

No. The data must be submitted via the online system.

However, to facilitate data entry, certain MPRN and GPRN data can be uploaded to the system using spreadsheets (.csv format only). This must be done using specific spreadsheet templates (available [here](#) for MPRN data and [here](#) for GPRN data). Note: these CSV files contain sample ‘dummy’ data that indicate the format of the data that should be included. You should delete all rows except the first one from these files before using them. See the *M&R User Guide* for further information.

15.32 Will we have to resubmit all of the data we report this year again in future years?

No. All data entered into the system is saved in the system and will be available for review – and in most cases to edit – in future years.

15.33 What will SEAI do with the data we submit?

SEAI will send the MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} submitted to the regulated meter operators (ESB Networks MRSO and Gas Networks Ireland), who will query their databases and return the corresponding consumption data to SEAI.

SEAI will then upload this data to the system by the *Provisional Scorecard Date*, from which time your provisional scorecard will be available.

Following the completion of the reporting cycle, SEAI will publish a report on the sector’s progress towards the 33% target. This will highlight progress across the sector as a whole and showcase individual achievements. It will also illustrate each individual public body’s energy performance since its preferred baseline period {FAQ 13.12} and compared to its 2020 target – in terms of a percentage change in each public body’s energy performance indicator. Public bodies that fail to report their data in accordance with their obligations will be listed accordingly in this publication. The data that will be published is outlined under item 7 in the Public Sector Energy Monitoring and Reporting System Terms and Conditions.

15.34 When will our Scorecard be available?

Your *provisional* scorecard will be available via the online system from the *Provisional Scorecard Date* onwards - assuming you submitted sufficient data to generate a scorecard. You will be notified by email when it becomes available. You will then have until the *Reporting Deadline* to make any final additions/edits to your data (except for your MPRNs/GPRNs, which must be finalised by the *MPRN & GPRN Deadline*). Immediately after the *Reporting Deadline*, some of the submitted reports will be selected {FAQ 8.3} for data verification assessment (DVA) {FAQ 8.2}. Your organisation’s final scorecard will be available for review online from the *Final Scorecard Date* onwards (assuming you submitted sufficient data to generate a scorecard).

15.35 What information will SEAI publish?

Upon completion of the reporting cycle, SEAI will publish a report on energy consumption in the public sector – based on the data collected through the monitoring & reporting system. In addition to aggregated data for the public sector and specific sub-sectors within it, the report will include the following information on each of the public bodies:

- Public body name.
- Reporting year, which is the year for which the data is being reported.
- Baseline period {FAQ 13.12} selected.
- Percentage change in organisation-level energy performance indicator (EnPI {FAQ 12.3}) since previous year.
- Percentage change in organisation-level EnPI since baseline.
- Percentage change in organisation-level total primary energy requirement (TPER) {FAQ 13.4} since previous year.
- Percentage change in organisation-level TPER savings since baseline.
- The reason reported by the public body for the trend in the EnPI during the reporting year. -
- List of (up to five) reasons reported by you that contributed to the energy performance during the reporting period {FAQ 15.24}.
- Scorecard graphic illustrating the trend in the public body's normalised EnPI {FAQ 13.11} since the baseline period and with respect to a target glidepath to 2020. The normalisation is implemented by setting the baseline EnPI to 100 and calculating subsequent annual values for the EnPI relative to this. The normalised EnPI is a convenient way to express the public body's performance since the baseline period and how it is doing compared to the target, without revealing the organisation's activity data.
- Status of the public body's report for the reporting year; the four possible status classifications as 'No Report Submitted', 'Report not Complete', 'Report Submitted – data to be Verified' and 'Report Complete'. Submission date of the last report submitted.
- Quantity of grid electricity consumed by the organisation in the reporting year, expressed in both kWh TFC and kWh TPER.
- Quantity of fossil fuels consumed by the organisation in the reporting year, expressed in both kWh TFC and kWh TPER.
- Quantity of renewable fuels consumed by the organisation in the reporting year, expressed in both kWh TFC and kWh TPER.
- Quantity of organisation-level TFC consumed in the reporting year, expressed in kWh.
- Quantity of organisation-level TPER consumed in the reporting year, expressed in kWh.
- List of energy saving projects implemented in the reporting year and amount of energy savings reported for each, expressed in kWh TFC.
- List of energy saving projects proposed for implementation in years after the reporting year and amount of estimated energy savings reported for each, expressed in kWh TFC.
- Quantity of energy consumed by the organisation in the reporting year, broken down by energy/fuel type, expressed in both kWh TFC and kWh TPER.

15.36 Is SEAI subject to the Freedom of Information (FOI) legislation?

Yes. SEAI is subject to the Freedom of Information (FOI) legislation.

Any requests made to the SEAI for M&R data under the FOI legislation will be handled in accordance with SEAI's internal freedom of information procedures.

15.37 What are the terms and conditions for the submission of data using SEAI's M&R system?

The terms and conditions for the submission of data to SEAI using the M&R system are available at from the M&R section of the SEAI website (<http://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>).

16 GATHERING DATA: WHICH TYPES OF ENERGY DO WE USE?

16.1 How do we know which types of energy we use?

There are two approaches to working out *which types* of energy you use:

- Follow the money;
- Identify & understand your significant energy users.

The first (and best) way involves investigating what energy supplies your organisation spends money on. The vast majority of organisations pay for their energy directly, i.e. they pay energy supplier(s) in return for network connected supplies (electricity or gas), for deliveries (e.g. heating oils, solid fuels, LPG) or for energy supplied offsite (e.g. transport fuels from filling stations). If your organisation pays for energy, then the corresponding bills (invoices) must be on your financial system somewhere. These bills must specify the type and quantity of energy supplied.

If your organisation doesn't pay directly for its energy (e.g. if your organisation pays for your light & heat as part of your rent to a landlord), then you should ask your landlord which types of energy your building uses.

The second approach involves developing an understanding of your significant energy users. Some basic rules of thumb in this regard:

- All organisations use electricity.
- Unless you use electricity for heating your facilities, your organisation also uses one or more forms of thermal energy for heating.
- If your organisation has central heating or a boiler, then you use one or more gas, oil, renewable or solid fossil fuel. Most organisations use either gas or oil.
- If your organisation has a fuel tank, then it uses some form of oil or LPG. LPG is stored under pressure in sealed tanks. Oil tanks are naturally ventilated.
- If you consume gas from the gas network, then you use natural gas.
- If you use gas from cylinders (for heating or cooking) or from a tank, then you use LPG.
- If your organisation uses mobile plant or machinery that requires liquid fuel, then you almost certainly use gasoil.
- If your organisation uses road vehicles, then you use some form of transport fuel, most likely road diesel and/or petrol.
- If your organisation uses marine vessels, then you most likely use marked gasoil.
- If your organisation has a wind turbine or a solar photovoltaic system or a small hydro system located on one of your sites, then you generate onsite electricity from non-fuel renewables.

16.2 What's the difference between natural gas, LPG, biogas and landfill gas?

Natural gas is a naturally occurring fossil fuel that is composed mainly of methane. It is piped through a national gas transmission & distribution network (in gaseous form, under pressure)

directly to end users in the industrial, power generation, services and domestic sectors. The network can be viewed here: www.bordgais.ie/networks/index.jsp?p=104&n=141.

LPG or liquefied petroleum gas is manufactured in oil refining, crude oil stabilisation and natural gas processing plants. It consists of propane and/or butane gases. It is stored under pressure as a liquid in cylinders or bulk tanks and is delivered to end users in small cylinders (sold in kilograms (kg)) or in tankers from which it is transferred to bulk tanks onsite (sold in litres (l)). It is typically used in boilers (for space & water heating) and for cooking.

Biogas is a form of renewable energy produced from organic matter through a biological process. It is typically derived from anaerobic digestion or fermentation processes and can be produced from a diverse range of organic feedstocks including biomass, sewage, agricultural waste, certain industrial wastes (e.g. from the food & beverage manufacturing sector) and municipal waste.

Landfill gas is a type of biogas that is produced from landfills. In Ireland, biogases are typically consumed within the confines of - or immediately adjacent to – the facilities at which they are produced. Note that the M&R treatment of landfill gas {FAQ 9.8} is different from that for other gases.

16.3 How do we know what type(s) of heating oil we use? What's the difference between them?

There are three broad categories of heating oil used in the public sector:

- **Kerosene** is also known as **Paraffin** or **28-Second Heating Oil**. It is reddish in colour. It is typically used in boilers for space & water heating.
- **Gasoil** is also known as **Marked Gasoil** or **Distillate** or **35-Second Heating Oil** or **Green Diesel** or **Marked Diesel**. It is dyed green in colour and is typically used in boilers for space & water heating. It is also used in generators, mobile plant, construction machinery, agricultural machinery and marine engines.
- **Light, Medium & Heavy Fuel Oils** are a range of heavier, higher viscosity heating oils typically only used in very large 'industrial' boilers. They correspond to BS 2869 Classes E, F and G respectively. They have minimum storage temperatures slightly above ambient.

The vast majority of heating oil used by public bodies is either Kerosene or Gasoil.

If you're not sure about which one you use, you can:

- Check the wording on your fuel supply documentation (orders, invoices, delivery dockets, receipts, statements, etc.);
- Ask your supplier(s);
- See if there are any identification markings or stickers on your tank(s);
- Check the colour of the fuel.

16.4 How do we know what type(s) of solid fossil fuels we use? What's the difference between them?

Only very few public bodies use solid fossil fuels and those that do use relatively small quantities. The main fuels used are:

- **Coal or Bituminous Coal** is used in some older solid fuel boilers for space and water heating as well as in open fires. It is sold by weight. For the purposes on the Monitoring & Reporting system, this category also includes **Anthracite Coals**.
- **Manufactured Ovoids or Smokeless Coal** is also used in some older solid fuel boilers for space and water heating as well as in open fires. It is sold by weight.
- **Sod Peat** is the turf that was traditionally used in Ireland. It is extracted from a bog in a roughly rectangular shape and air-dried before use. It is sold by weight and typically only used in open fires.
- **Peat Briquettes** are a manufactured product made from compressed dried peat. They are typically used in open fires or small solid fuel boilers (domestic scale). They are sold in bales (1 bale = 12.6 kg = 0.0126 tonne).
- **Milled Peat** is air dried peat in powder or crumb form. It is typically only used in power generating stations.

16.5 How do we know what type(s) of wood fuels we use? What's the difference between them?

There are three broad categories of wood fuels used in the public sector:

- **Wood Chips** are a renewable fuel comprising small pieces of wood that can be used in boilers for space and water heating. They are sold by weight and can have moisture contents of between 30-60%, depending on the source of the chips and the duration and nature of their storage prior to use. Typical moisture content is 35%. If you consume wood chips with a moisture content other than 35%, you should report them as an 'other energy type' {FAQ 10.3}.
- **Wood Pellets** are a manufactured product comprising wood shavings and sawdust that have been formed into pellets. They are sold by weight and typically used for heating in boilers and stoves.
- **Wood Briquettes / Wood Logs** are typically used in some older solid fuel boilers for space and water heating as well as in open fires. Wood briquettes are a manufactured product made by compressing wood particles.

Additional information on wood energy is available from Coford's wood energy FAQ at www.woodenergy.ie/frequentlyaskedquestions/.

16.6 How can we tell what the moisture content of our wood chips is?

If the sales documentation (i.e. orders, invoices, delivery dockets, receipts, statements, etc.) does not specify the moisture content, you should ask your wood chip supplier to tell you. Note that if

you consume wood chips with a moisture content other than 35%, you should report them as an 'other energy type' {FAQ 10.3}.

16.7 How do we know what type(s) of road transport fuels we use? What's the difference between them?

The vast majority of road vehicles use either road diesel or petrol:

- **Road Diesel**, which is also known as **Auto Diesel**, **White Diesel** or **DERV** is used in nearly all diesel-engined road vehicles. It is clear in colour. Conventional specifications for Road Diesel include small quantities of blended biodiesel (about 3% in 2010).
- **Petrol**, which is also known as **Gasoline** or **Motor Gasoline** or **Motor Spirit** is used in nearly all petrol-engined road vehicles as well as in some mobile plant & equipment and some marine engines. It is clear in colour. Conventional specifications of Petrol include small quantities of blended bioethanol (about 3% in 2010).
- **Biodiesel** is a biofuel produced from vegetable or animal oils, of diesel quality. Examples of biodiesels include those based on **FAME (Fatty Acid Methyl Ester)** and derived from **Pure Plant Oil (PPO)**, **Used Cooking Oil (UCO)** and **tallow**. Biodiesels are typically consumed as part of a blended product with Road Diesel. The percentage of the blend can vary. Some vehicles run on pure biodiesel.
- **Bioethanol** is a biofuel produced from biomass and/or the biodegradable fraction of waste. Examples of bioethanol include ethanols produced from sugar beet, wheat, corn and sugar cane. Bioethanols are typically consumed as part of a blended product with Petrol. The percentage of the blend can vary. Some vehicles run on pure Bioethanol.

16.8 How should we report biofuel consumption?

There are three broad categories of biofuel consumption in road vehicles:

- The vast majority of mineral (conventional) diesel and petrol sold on the market contains small blended quantities of biofuels: biodiesel in the case of road diesel and bioethanol in the case of petrol. The average national blend rate is about 3% (2010). Most purchasers of fuels do not realise that a small percentage of their mineral oil product is in fact biofuel.
- A very small number of organisations use pure biofuels (or very high blends) in dedicated vehicles.
- Another small group of organisations (but probably larger than the second group) proactively procure mineral oil products with blended biofuels at blend rates higher than the national average, but typically less than about 10%.

The following is how you should report your *biodiesel* consumption:

- For biodiesel consumed as part of a conventional Road Diesel (DERV) specification, you simply record the total amount of litres of the fuel used as 'Road Diesel (DERV)'. Note that the system automatically applies the national average biodiesel blend to all of your conventional Road Diesel (DERV) consumption. You can assume that all of your Road Diesel consumption is of a 'conventional specification', unless your organisation has specifically procured a specific biofuel blend (see below).

- For biodiesel consumed as pure biodiesel (100%), you should record this consumption, in litres, as 'Pure Biodiesel'.
- For biodiesel consumed in a blend other than a standard Road Diesel (DERV) specification, then you should record the total consumption of this fuel in litres as a 'Biodiesel Blends other than standard spec DERV' and record the percentage biodiesel contained in the blend. You will have only consumed such a blend if your organisation has specifically asked for one (i.e. specifically procured such a blend). Therefore, the sales documentation should state the relevant quantities.

The same approach is used for reporting *bioethanol* consumption:

- For bioethanol consumed as part of a conventional Petrol specification, you simply record the total amount of litres of the fuel used as 'Petrol'. Note that the system automatically applies the national average bioethanol blend to all of your conventional Petrol consumption. You can assume that all of your Petrol consumption is of a 'conventional specification', unless your organisation has specifically procured a specific biofuel blend (see below).
- For bioethanol consumed as pure bioethanol (100%), you should record this consumption, in litres, as 'Pure Bioethanol'.
- For bioethanol consumed in a blend other than a standard Petrol specification, then you should record the total consumption of this fuel in litres as a 'Bioethanol Blends other than standard spec Petrol' and record the percentage bioethanol contained in the blend. You will have only consumed such a blend if your organisation has specifically asked for one (i.e. specifically procured such a blend). Therefore, the sales documentation should state the relevant quantities.

If you use biofuels for non-transport purposes (e.g. in a boiler), then you should report its consumption using the 'Add Other Energy Type' function {FAQ 15.15}.

16.9 What fuels are used for marine transport?

The vast majority of marine engines use either:

- **Marked Diesel / Marine Gasoil**, which is the same as **Gasoil** but is different from Marine Diesel Oil..
- Ordinary **Petrol**, which is also known as **Gasoline** or **Motor Gasoline** or **Motor Spirit** – this is used in some smaller marine engines.

If your organisation uses other fuels for marine transport (e.g. marine diesel oil), you should report this consumption using the 'Add Other Energy Type' function {FAQ 15.15}

16.10 How do we know what type(s) of aviation transport fuels we use? What's the difference between them?

There are two main types of aviation fuels:

- **Aviation Gasoline** or **AVGAS** is motor gasoline that has been processed especially for use in aviation reciprocating (piston) engines.

- **Jet A1 Kerosene or Jet Kero or Jet Fuel or Jet Kerosene** is used for aviation gas turbine engines (turbofans, turboprops & jets). It has particular specifications which are established by the International Air Transport Association (IATA).

17 GATHERING DATA: HOW MUCH ENERGY DO WE USE?

17.1 How do we know how much energy we have consumed?

In general, the energy use data should be derived either from either meters or bills:

- **Meters** record the quantity of energy that ‘passes through’ them. All electricity connections (except most public lighting) and all natural gas connections are metered. Some (but not all) heating oil tanks, bulk LPG tanks and onsite transport fuel tanks are metered. District heat connections are also typically metered. Remember:
 - Not all meters show consumption in the same units (even meters used for the same fuel type), so you should always note the metered units along with all readings.
 - Some meters require conversion factors to convert readings to meaningful units.
 - To work out the consumption over a period of time using a meter, you will need readings from the beginning and the end of the period and you should subtract the former from the latter to determine how much was used.
- All energy supplies that your organisation pays for are billed. **Bills** are a very useful source of consumption data as they *should* clearly specify the quantity of energy provided (e.g. in litres, tonnes etc.) as well as the Euro amount. If your bills are not clear ask your supplier to issue you with clear, unambiguous bills. For fuels purchased in bulk (e.g. heating oils, LPG, solid fuels), bills can provide the basis for estimating the energy consumption in a calendar year. However, the billed amount may not equal the amount you actually consumed in the period (see FAQ below).

Other methods appropriate for specific energy types include tank dipping, fuel card systems and direct enquiries to your supplier(s). In some instances, your suppliers’ records may be better than yours! You should contact them and see what information they can provide. You should also incorporate obligations into future energy supply relationships to ensure that suppliers provide relevant, coherent data to you – to help you fulfil your reporting obligations.

The following FAQs address some of the issues typically encountered when seeking to determine consumption for specific energy types.

17.2 How do we know how much electricity we have consumed?

Note: The only instances in which you should have to work out your electricity consumption from bills are:

- For the years 2001-2005 if you have selected the 2001-2005 baseline period {FAQ 13.12}, and/or;
- If you have chosen to self-report (part of) your electricity consumption from 2006 onwards.

The M&R system automatically sources the electricity consumption data (from 2006 onwards) corresponding to your *validated* {FAQ 18.5} MPRNs directly from the regulated meter operator {FAQ 9.2}.

Electricity is metered and billed in kWh. The best way to calculate your annual consumption is to record your own meter readings regularly (including at the beginning and end of each year).

Alternatively, you can work out your annual consumption by adding up all of the kWh on all of your bills for the entire year, as follows:

1. Identify the meter reading (bill) closest to the start of the year, i.e. closest to 1st January – this could be before or after this date;
2. Identify the meter reading (bill) closest to the end of the year, i.e. closest to 31st December – this could be before or after this date;
3. Subtract the meter reading shown in the start-of-period bill (step 1) from that shown in the end-of-period bill (step 2);
4. Multiply the result of step 3 by the meter multiplier to convert to kWh (note: this is usually 1.0, but is different for some meters - it is shown on your bills);
5. Divide the result obtained in step 4 by the number of days between the two meter reads and multiply by 365 to calculate the annual consumption for the year.

You can also get the information from the online energy bill reporting tools provided by the electricity suppliers. In all cases, you should retain records of your calculations for potential data verification assessment (DVA) {FAQ 8.2} by SEAI.

17.3 If we are self-reporting electricity consumption for the period 2001-2005, do we have to provide actual annual consumption data for each year or is it sufficient to provide average annual consumption data for each of the years in the period?

It is preferable to submit actual annual consumption data. However, average annual consumption data over the 2001-2005 baseline period {FAQ 13.12} is acceptable - for electricity only. It is important that such averages are calculated in a robust manner. The following is an appropriately robust approach to undertaking the calculation for each electricity account:

1. Identify the meter reading (bill) closest to the start of the baseline period, i.e. closest to 1st January 2001 – this could be before or after this date;
2. Identify the meter reading (bill) closest to the end of the baseline period, i.e. closest to 31st December 2005 – this could be before or after this date;
3. Subtract the meter reading shown in the start-of-period bill (step 1) from that shown in the end-of-period bill (step 2);
4. Multiply the result of step 3 by the meter multiplier to convert to kWh (note: this is usually 1.0, but is different for some meters - it is shown on your bills.);
5. Divide the result obtained in step 4 by the number of days between the two meter reads and multiply by 365 to calculate the average annual consumption for each of the five years;
6. Add all of the calculated average annual consumptions for each meter to calculate the total electricity for each of the baseline years.

Note that the above approach is acceptable for self reported electricity for the period 2001 to 2005 only.

In all cases, you should retain records of your calculations for potential data verification assessment (DVA) {FAQ 8.2} by SEAI.

17.4 How do we know how much natural gas we have consumed?

Note: The only instances in which you should have to work out your natural gas consumption from bills are:

- For the years 2001-2005 if you have selected the 2001-2005 baseline period {FAQ 13.12}, and/or;
- If you have chosen to self-report (part of) your natural gas consumption from 2006 onwards.

The M&R system automatically sources the natural gas consumption data (from 2006 onwards) corresponding to your *validated* {FAQ 18.5} GPRNs directly from the regulated meter operator {FAQ 9.2}.

Natural gas is metered and billed in kWh. The best way to calculate your annual consumption is to record your own meter readings regularly (including at the beginning and end of each year). Alternatively, you can work out your annual consumption by adding up all of the kWh on all of your bills for the entire year, as follows:

1. Identify the meter reading (bill) closest to the start of the year, i.e. closest to 1st January – this could be before or after this date;
2. Identify the meter reading (bill) closest to the end of the year, i.e. closest to 31st December – this could be before or after this date;
3. Subtract the meter reading shown in the start-of-period bill (step 1) from that shown in the end-of-period bill (step 2);
4. Multiply the result of step 3 by the meter multiplier to convert to kWh (note: this is usually 1.0, but is different for some meters - it is shown on your bills);
5. Divide the result obtained in step 4 by the number of days between the two meter reads and multiply by 365 to calculate the annual consumption for the year.

In all cases, you should retain records of your calculations for potential data verification assessment (DVA) {FAQ 8.2} by SEAI.

17.5 An electricity / natural gas bill period covers days in more than one year. What do we do?

Note: The only instances in which you should have to work out your electricity or natural gas consumption from bills are:

- For the years 2001-2005 if you have selected the 2001-2005 baseline period {FAQ 13.12}, and/or;
- If you have chosen to self-report (part of) your electricity or natural gas consumption from 2006 onwards.

The M&R system automatically sources the electricity and natural gas consumption data (from 2006 onwards) corresponding to your *validated* {FAQ 18.5} MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} directly from the regulated meter operator(s) {FAQ 9.2}.

Electricity and gas bills typically cover two-month periods that do not coincide exactly with calendar months. Therefore, for a bill that straddles a year end, you should use the following simple method to allocate consumption to the relevant year:

- Calculate the total number of days covered by each bill (no. of days between the current and last bill) – the cut-off dates will be on the bill;
- Work out how many of these days fall into each of the two years covered by the bill;
- Divide the number of energy units consumed (i.e. kWh of electricity or gas) by the number of days in the bill period;
- Multiply this daily value by the number of bill days in the year you're interested in – this is the consumption from this bill that is attributable to the year in question.

Remember that this means that you will need to include data from the first bill of the next year in your consumption figures for this year, e.g. a bill received in early February 2012 will include kWh consumed in December 2011.

17.6 How do we know how much LPG we have consumed?

LPG is sold in litres (for bulk deliveries, i.e. delivered in tankers) or by weight (small cylinders):

- If your **bulk** LPG supply is metered (i.e. if there is a meter between the tank and the equipment that uses LPG), then taking readings from this is the best way of determining your consumption. If you don't have a meter or sufficient meter readings you should estimate the consumption from your LPG bills. Remember though that the billed quantities won't necessarily match your consumption in a specific year because your tank(s) could have different levels at the start and end of the year. You should keep a record of LPG deliveries on a year to year basis. Over time this will assist you to better understand how LPG consumption changes on a monthly basis throughout the year and you will be able to make progressively better estimates of how much was consumed between deliveries.
- The quantity of LPG stored in **cylinders** is written on the cylinders in kilograms. Invoices (bills) should also have this information. Multiplying this by the total number cylinders used will give you the total weight used in a year in kilograms.

17.7 How do we know how much heating oil we have consumed?

The vast majority of oil fuels are sold in litres:

- If your oil supply is metered (i.e. if there is a meter between the tank and the equipment that uses the oil), then taking readings from this is the best way of determining your consumption.
- If you don't have a meter, tanks can be dipped to calculate the quantity used over time.
- Alternatively, you could estimate the consumption from your bills. Remember though that the billed quantities won't necessarily match your consumption in a specific year because your tank(s) could have different levels at the start and end of the year (and you won't know these levels unless you have dipped the tank(s)). You should keep a record of oil deliveries on a year to year basis. Over time this will assist you to better understand how oil

consumption changes on a monthly basis throughout the year and you will be able to make progressively better estimates of how much was consumed between deliveries.

17.8 How do we know how much solid fuels we have consumed?

The vast majority of solid fuels (coal, peat, wood chips, wood pellets etc.) are sold in tonnes or, for smaller quantities, in kilograms. As solid fuels cannot be metered in the same way that liquids or gases can, you will almost certainly have to estimate your consumption over the year from your bills:

- For smaller quantities of fuels purchased in **packages (bags, bales etc.)** such as coal, briquettes & wood pellets, both the packaging and the invoices should show the weight of fuel contained in each package. You should multiply the weight by the quantity purchased to work out the consumption. As an example, the typical bag size for smokeless fuels and coal is 40 kg and the typical weight for a bale of briquettes is 12.6 kg.
- If you purchase solid fuels in **bulk** (e.g. coal, wood chips, wood pellets, loose briquettes), then the invoices (bills) should show the tonnes delivered. If your organisation operates a weighbridge, this could be used to calculate delivered quantities of bulk fuels.

As with oil, the billed quantities won't necessarily match your consumption in a specific year because your stores could have different stock levels at the start and end of the year (and you are unlikely to know what these levels are). You should keep a record of all deliveries on a year to year basis. Over time this will assist you to better understand how solid fuel consumption changes on a monthly basis throughout the year and you will be able to make progressively better estimates of how much was consumed between deliveries.

Remember that 1 tonne = 1,000 kilograms.

17.9 Do we report unconsumed quantities of fuel in stock at the end of the year?

No.

For liquid and solid fuels, the delivered (billed) quantities won't necessarily match your consumption in a specific year because your stores could have different stock levels at the start and end of the year. Only the fuel consumed in each calendar year should be reported. You should keep a record of all deliveries on a year to year basis and try to estimate the quantities in stock at year end. Over time this will assist you to better understand how fuel consumption changes on a monthly basis throughout the year and you will be able to make progressively better estimates of how much was consumed between deliveries.

17.10 How do we know how much district heating heat we have consumed?

In most cases the district heating supplies are metered through a 'heat meter'. The amount of energy used should also be shown on your energy bill from the operator/owner of the scheme. This will normally be billed in kWh.

If in doubt you should contact the operator of the system.

17.11 How do we know how much petrol and diesel we have consumed?

All transport fuels are metered, dispensed and billed in litres. There are several ways to calculate your organisation's consumption, depending on the scale of consumption involved:

- If your organisation purchases fuels through a **fuel card** system, this is the easiest way to calculate consumption. You should be able to access all your purchases.
- If you don't operate a fuel card system, you can review your **bills** to determine the number of litres purchased in each transaction. **Trip computers** on vehicles can also be used to calculate fuel consumption.
- If your organisation purchases transport fuels in **bulk** (i.e. dispense at your facility), then you should meter your own dispense point. If you don't meter this consumption, then you will have to estimate it from your bills. Remember though that the billed quantities for bulk deliveries won't necessarily match your consumption in a specific year because your tank(s) could have different stock levels at the start and end of the year. You should keep a record of bulk deliveries; over time this will assist you to better understand how fuel consumption changes on a monthly basis throughout the year and you will be able to make progressively better estimates of how much was consumed between deliveries.

17.12 A small quantity of biofuels is blended with the diesel / petrol we use. How should we account for this?

Many fuel suppliers blend small quantities of biofuels (up to 7%, but typically closer to 4%) into 'conventional' (i.e. mineral) road diesel and petrol. More often than not, consumers are unaware of this biofuel component in the transport fuels they consume.

Biofuels consumed as part of standard specification diesel or petrol need not be explicitly reported. The system automatically assumes that a small percentage of this consumption is biofuels. See FAQ 16.8 for a detailed discussion of how to report other types of biofuels.

17.13 We are struggling to work out our consumption figures. What should we do?

Read all of the questions in this FAQ and review the other guidance materials.

SEAI's Energy Management Action Plan is an online tool which provides a step by step guide to creating a best practice action plan for energy management in organisations. Three of the twenty steps are particularly relevant for identifying and understanding energy consumption:

- Step 7: Identify total energy consumption and develop an energy baseline - www.seai.ie/EnergyMAP/Identify/Step-7-Identify-total-energy-consumption-and-develop-an-energy-baseline/
- Step 8: Survey energy use & identify significant energy users - www.seai.ie/EnergyMAP/Identify/Step-8-Survey-energy-use-identify-significant-energy-users-//

- Step 9: Identify factors that influence energy use and establish Energy Performance Indicators (EnPI's) - www.seai.ie/EnergyMAP/Identify/Step-9-Identify-factors-that-influence-energy-use-establish-Energy-Performance-Indicators-EnPI-s/

18 GATHERING DATA: MPRNs & GPRNs

18.1 What is an MPRN?

A Meter Point Reference Number (MPRN) is a unique 11-digit number assigned to every single electricity connection and meter in the country. Each individual meter has its own MPRN. An example of what an MPRN looks like is: 10009998888.

Your MPRN stays the same even if you change electricity supplier. Regardless of which electricity supplier supplies electricity through your meter, the MPRN is managed by the ESB Meter Registration System Operator (MRSO), which is a fully regulated ring-fenced business unit within ESB Networks.

Note that the MPRNs used for unmetered public lighting systems are referred to as *group* MPRNs (or GMPRNs) {FAQ 18.10}. These are also eleven digits long, but they start with the digit 9.

18.2 What is a GPRN?

A Gas Point Registration Number (GPRN) is a unique reference number assigned to every gas point on the natural gas network. A gas point is a point where gas is off-taken from the gas network system, measured by a meter and consumed by an end user. Each individual gas point has its own GPRN. GPRNs have up to 7 digits. An example of what a GPRN looks like is: 2354868.

Your GPRN stays the same even if you change natural gas supplier. Regardless of which gas supplier supplies natural gas through your meter, the GPRN is managed on an independent basis by Gas Networks Ireland.

Only natural gas connections have GPRNs. LPG supplies do not have GPRNs.

18.3 How do we find our organisation's MPRN(s)?

Your MPRN(s) {FAQ 18.1} are prominently displayed on the electricity bills you receive from your supplier(s). For example, the MPRN (circled & labelled as 6) is shown on the top right of this extract from a sample Energia electricity bill.

energia
Switched on

CUSTOMER SERVICE
Emergency Faults: 1850 372 999
Account Enquiries: 1850 363 744

ACCOUNT INFORMATION Bill No: 131099
Account Number: 2848870684
Accounting Period: 24 Apr 2006 to 20 Apr 2006
MPRN Number: 10009164831
DUGS / DUGS Out Scale: 0001 Meter Conf Conf: M0000 Profile: 06
Maximum Import Capacity: 34 kVA (For PSO purposes only)

ACCOUNT SUMMARY Date: 10 May 2006
Account balance after previous bill: €1,377.16
Current Bill: €368.23
NEW BALANCE DUE BY 24 May 2006: €1,745.39

PREMISES SUPPLIED
ANY STREET, ANY TOWN

DETAILS OF METER READS GP Night Saver Green Energy

	Meter No.	Previous	Present	Multiplier Factor	Total Units	Last meter read on 10 Jan
08:00 - 23:00	Z00006520	44680 E	46576 E	1	1,896	38,945 A
23:00 - 08:00	Z00006520	33346 E	33776 E	1	430	32,016 A

DETAILS OF CHARGES
Standing Charge: €10.02
Energia GPNS Energy - First: 1,896 kWh @ €0.144 = €273.02

Source: Energia

The MPRNs are also clearly illustrated on the following sample bills from other suppliers:

- Airtricity: the MPRN is shown on the extreme top right of this sample bill:
www.airtricity.com/ie/home/help-centre-ie/understanding-your-bill/start-here/your-bill-explained/electricity-cheque-direct-debit/your-bill-explained/
- Bord Gáis Energy: the MPRN is shown on the right of this sample (residential) bill:
<http://www.bordgaisenergy.ie/help-and-questions/home/electricity/billing/?q=16>
- Electric Ireland: the MPRN (labelled as item 4) is shown on the top right of this sample bill:
<https://www.electricireland.ie/residential/help/billing/understanding-your-electricity-bill>

In addition to the MPRN, there are often several other reference numbers shown on a bill, which can be confusing, e.g. Account Number, Meter Number and Invoice Number. Your MPRN should always be clearly labelled on your bill as the MPRN.

If you cannot find your MPRN(s), contact your electricity supplier(s) who will be able to check for you.

18.4 How do we find our organisation's GPRN(s)?

Your GPRN(s) {FAQ 18.2} are prominently displayed on the natural gas bills you receive from your supplier:

- Bord Gáis Energy: the GPRN is shown on the right of this sample natural gas bill (labelled item 8):
https://www.bordgaisenergy.ie/docs/help-and-questions/home/gas/G25886_BGE_Standard_Bill_150410.pdf

- Airtricity: the GPRN is shown on the top right of this sample bill:
<http://www.airtricity.com/ie/home/help-centre-ie/understanding-your-bill/start-here/your-bill-explained/electricity-and-gas/your-bill-explained>

In addition to the GPRN, there are often several other reference numbers shown on a bill, which can be confusing, e.g. Account Number, Meter Number and Invoice Number. Your GPRN should always be clearly labelled on your bill as the GPRN.

If you cannot find your GPRN(s), contact your gas supplier who will be able to check for you.

18.5 Which MPRN(s) and GPRN(s) should we report & what form of validation & consent is required?

You should report the MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} for all of the electricity and natural gas connections for which your organisation is an attributed consumer, i.e. if the energy consumption through the relevant meter comes within the scope of your organisation's reportable energy consumption then you should report the relevant MPRN or GPRN.

MPRNs and GPRNs can be shared by more than one organisation. There can also be complicated arrangements regarding the 'ownership' of MPRNs or GPRNs; one commonplace example is where one organisation consumes the electricity (e.g. a tenant) but another pays the electricity bill (e.g. a landlord). To understand your organisation's options and obligations with respect to reporting MPRNs and GPRNs, it is important to differentiate between up to four different roles for each MPRN or GPRN:

Listed end-user: this is the legal entity or individual that is named under the 'supply address' on the electricity or natural gas bill. (Some energy suppliers use the phrase 'premises supplied' or similar, instead of 'supply address'. Note that the 'supply address' should not be confused with the 'billing address' (even though in some cases both can be the same)). The listed end-user as shown under the 'supply address' should include the name of the organisation in the first line. However, in many cases it does not. There can be several reasons for this, e.g.:

- Your organisation was never properly registered on the meter operator's system as being the listed end-user for the MPRN/GPRN, e.g. a named individual in your organisation or simply the address of the building were registered as the listed end-user;
- The meter operator's records have not been updated since a different organisation consumed energy through the meter, e.g. since your organisation moved into the building;
- The name of your organisation has changed over time and the older organisation name is still on the meter operator's system as the listed end-user.

Note that none of the above 'anomalies' in themselves should have any physical or contractual effect on the supply of energy to your organisation. However, they can have implications for accessing the energy consumption data corresponding to these MPRNs/GPRNs from the meter operators. There can only be one listed end-user for each MPRN or GPRN. The listed end-user is also the legal entity (or individual) that has a connection agreement with ESB Networks (MPRNs).

Bill payer: this is the organisation that has the contractual relationship with the energy supplier and pays the bills corresponding to the MPRN/GPRN. There can only be one bill payer per MPRN or GPRN. In some cases, the bill payer does not actually consume the energy that it pays for, e.g. if the bill payer is a landlord that lets the entire building to a tenant.

Energy user: this is the organisation that actually consumes the energy that passes through the relevant meter. There can be more than one energy user per MPRN or GPRN, e.g. if more than one organisation share a building. In some cases, an energy user does not pay the energy bill *directly* (i.e. it does not have a contractual relationship with the relevant energy supplier), e.g. if the energy user rents (part-of) a building from a landlord and the landlord pays the energy bill.

Attributed consumer: this is the organisation within whose scope the consumption is reportable. There may be electricity and natural gas consumption through MPRNs and GPRNs (among other energy types) attributable to your organisation (i.e. reportable by you) that is not physically consumed by your organisation, i.e. it is not consumed by buildings, facilities or energy users occupied or operated directly by your organisation. Examples include:

- (Public private partnerships) PPPs {FAQ 3.4} that come under the aegis of your organisation;
- Facilities that are operated on your behalf by a third party, e.g. a local authority swimming pool operated and maintained under contract by a private company;
- Services that are provided *on your organisation's behalf* by a third party {FAQ 3.4}, e.g. waste management services provided by a private contractor on behalf of a local authority that has a contractual relationship with the waste management contractor;
- Activities that your organisation outsources to a service provider {FAQ 3.4};
- Shared services {FAQ 3.5}.

There can be more than one attributed consumer per MPRN or GPRN.

For the majority of MPRNs and GPRNs in the public sector, the same organisation is the listed end-user, the bill payer, the energy user and the attributed consumer. Reporting these MPRNs and GPRNs through the monitoring & reporting system and accessing the data corresponding to them is straightforward. However, more complicated arrangements are in place for many MPRNs and GPRNs in the sector. For example:

- Your organisation could be the listed end user on the bill and pay the bill but may only consume a portion (large or small) of the energy that passes through the meter, e.g. a tenant organisation (private or public sector) could consume some of the energy.
- Your organisation could be the listed end-user on the bill and pay the bill but may consume none of the energy that passes through the meter, e.g. a tenant organisation could consume all of the energy.
- Your organisation could pay the bill but it might not be the listed end-user, e.g. the listed end-user could be a named individual in your organisation or it could be a superseded organisation name or there could be some other anomaly with the listed end user vis-à-vis your organisation's current name.
- Your organisation could be the energy user but might not pay the bill directly, e.g. you could pay for energy as part of your rent to your landlord or as part of a service charge to your landlord.

There are several other more complicated arrangements that can exist. Reporting these MPRNs and GPRNs through the monitoring & reporting system and accessing the data corresponding to them is less straightforward. The table below summarises the approach you should adopt for reporting MPRNs & GPRNs with different combinations of listed end-user, bill payer, energy user and attributed consumer.

Scenario					Your Reporting Options & Obligations	
Description <i>(Note: these descriptions are illustrative examples only. This is not an exhaustive list of scenarios. If in doubt consult the four columns to the right to find the correct match to your situation.)</i>	Your Organisation ³ is...					
	The Listed End User	The Bill Payer	An Energy User ⁴	An Attributed Consumer ⁴	Report MPRN / GPRN	Form of Validation / Consent Required <i>(see explanation after table)</i>
You pay the bill, your organisation is the listed end-user and consumes all or part of the electricity/gas	Yes	Yes	Yes	Yes	Yes ⁵	[i] Declare ‘Valid; Owned; Listed end-user’
You pay the bill and your organisation is the listed end user but your tenant(s) (for which you are <i>not</i> reporting) consume(s) <i>all</i> of the energy	Yes	Yes	No	No	Yes ⁵ (attributable consumption = 0%)	[i] Declare ‘Valid; Owned; Listed end-user’
You pay the bill but your organisation is <i>not</i> the listed end user (e.g. because of one of the anomalies outlined above) and your tenant(s) (for which you are <i>not</i> reporting) consume(s) <i>all</i> of the electricity/gas	No	Yes	No	No	Yes ⁵ (attributable consumption = 0%)	[ii] Declare ‘Valid; Owned; Listed end-user consent received’
You pay the bill & consume all or part of the energy but your organisation is not the listed end-user, e.g. because of one of the anomalies outlined above	No	Yes	Yes	Yes	Yes ⁵	[ii] Declare ‘Valid; Owned; Listed end-user consent received’
Your landlord (or another organisation for which you are not reporting) pays the energy bill but your organisation consumes all or part of the energy	No	No	Yes	Yes	Yes ⁶	[iii] Declare ‘Valid; Not-owned; Listed end-user consent received’
Your PPP partner pays the energy bill and consumes the energy, e.g. at a facility it operates	No	No	Yes or No	Yes	Yes ⁶	[iii] Declare ‘Valid; Not-owned; Listed end-user consent received’

³ In all cases, reference to your organisation refers to your public body and any sub-organisations for which your organisation is reporting through the monitoring & reporting system.

⁴ Either all or part of the electricity (natural gas) consumption through the MPRN (GPRN)

⁵ Alternatively, you could self-report the energy consumption attributable to your organisation through this MPRN/GPRN as part of your organisation's self-reported electricity sub-total. However, if you do this, you would not have access to the meter-level consumption data.

⁶ Alternatively, you could self-report the electricity consumption attributable to your organisation through this MPRN as part of your organisation's self-reported electricity sub-total. However, if you do this, you would not have access to the MPRN-level consumption data.

Scenario					Your Reporting Options & Obligations		
Description <i>(Note: these descriptions are illustrative examples only. This is not an exhaustive list of scenarios. If in doubt consult the four columns to the right to find the correct match to your situation.)</i>	Your Organisation ³ is...						
	The Listed End User	The Bill Payer	An Energy User ⁴	An Attributed Consumer ⁴	Report MPRN / GPRN	Form of Validation / Consent Required <i>(see explanation after table)</i>	
	Your O&M contractor pays the energy bill and consumes the energy at the facility it operates on your behalf	No	No	Yes or No	Yes	Yes ⁶	[iii] Declare ‘Valid; Not-owned; Listed end-user consent received’
	An independent contractor that provides services <i>on your behalf</i> pays the energy bill and consumes the energy providing those services on your behalf	No	No	Yes or No	Yes	Yes ⁶	[iii] Declare ‘Valid; Not-owned; Listed end-user consent received’
	An energy services company pays the bill on your behalf and supplies energy to your organisation via facilities that it operates	No	No	Yes or No	Yes	Yes ⁶	[iii] Declare ‘Valid; Not-owned; Listed end-user consent received’
	Your organisation is the (legacy) listed end-user; you do not pay the bill or consume the energy.	Yes	No	No	No	No	N/a

The validation options numbered [i] – [iii] and outlined in the seventh column in the table above are:

- *[i] Declare ‘Valid; Owned; Listed end-user’*: you are confirming that your organisation was the listed end user of the MPRN/GPRN in the year(s) indicated and that your organisation had a direct contractual arrangement in place with one or more electricity/natural gas supplier(s) for the supply of electricity/natural gas through the MPRN/GPRN in the year(s) specified. Your organisation is also consenting for the electricity/natural gas meter operator to disclose to your organisation and to SEAI the historic electricity/natural gas account data for the MPRN/GPRN for the years specified – for the purpose of the SEAI Public Sector Monitoring & Reporting Project.
- *[ii] Declare ‘Valid; Owned; Listed end-user consent received’*: you are confirming that although your organisation was not the listed end user of the MPRN/GPRN in the year(s) indicated, your organisation had a direct contractual arrangement in place with one or more electricity/natural gas supplier(s) for the supply of electricity/natural gas through the MPRN/GPRN in the year(s) specified. You are also confirming that you have received consent from the listed end-user for the electricity/natural gas meter operator to disclose to your organisation and to SEAI the historic electricity/natural gas account data for the MPRN/GPRN for the years specified – for the purpose of the SEAI Public Sector Monitoring & Reporting Project.
- *[iii] Declare ‘Valid; Not-owned; Listed end-user consent received’*: you are confirming that although your organisation was not the listed end user of the MPRN/GPRN in the year(s) indicated, your organisation was an attributed consumer. You are also confirming that you have received consent from the listed end-user for the electricity/natural gas meter operator to disclose to your organisation and to SEAI the historic electricity/natural gas account data for the MPRN/GPRN for the years specified – for the purpose of the SEAI Public Sector Monitoring & Reporting Project.

18.6 How should we report/validate MPRNs or GPRNs that used to be ours, but no longer are?

If your organisation did not consume energy through the meter(s) during a specific year, then you should classify the meter(s) as ‘Not Validated’ *for the relevant years*.

If your organisation consumed energy through the meter(s) for part of a specific year and another organisation did so for the remainder of that year, then you should classify the meter(s) as ‘Not Validated’ for that specific year AND self-report the relevant consumption{FAQ 9.3 & 10.2}. If you are unsure whether a third party consumed energy through the meter(s) for the remainder of the year, you should also choose this option.

If your organisation consumed energy through the meter(s) for part of a specific year and the connection remained unused for the remainder of the year, then, *as an alternative* to the option in the preceding paragraph, you can classify the meter(s) using one of the ‘valid’ classifications.

18.7 We cannot validate one or more MPRN(s) or GPRN(s). What should we do?

If you cannot validate {FAQ 18.5} one or more MPRNs or GPRNs, then select ‘Not Validated’ in the relevant fields.

You should:

- Self report the relevant electricity consumption under the 'Net Electricity Imports (non-MPRN data)' energy type
- Self report the relevant natural gas consumption under the 'Natural Gas (non-GPRN data)' energy type

18.8 Why do we have to validate our MPRNs & GPRNs?

SEAI is committed to incorporating robust data protection principles into the M&R process. For this reason, SEAI requires that you confirm that your submitted meter numbers are valid and that you consent to SEAI requesting the relevant consumption data from the meter operator(s) {FAQ 18.5}.

As the ownership of specific MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} can change over time (e.g. as organisations change premises), it is necessary to undertake this validation step every year.

MPRNs and GPRNs must be validated by the *MPRN & GPRN Deadline* at the latest. Non-validated MPRNs or GPRNs or meter numbers entered after this date will not be processed.

18.9 How many MPRN(s) and GPRN(s) does our organisation have?

Your organisation should have a separate, unique MPRN for every metered electricity connection. If your organisation has more than one site (location), it will have at least one metered connection with a unique MPRN at each site (location). Some sites or buildings can have more than one metered connection and therefore will have more than one MPRN.

Your organisation should have a separate, unique GPRN for every metered natural gas connection. If your organisation has more than one site (location) connected to the gas grid, it will have at least one metered connection with a unique GPRN at each site (location). Some sites or buildings can have more than one metered connection and therefore will have more than one GPRN.

You may not receive a separate bill from your electricity supplier for each MPRN. Some electricity suppliers combine several connections (MPRNs) onto a single bill every billing period; however, in these cases each individual MPRN should be listed on the bill. Similarly, several gas connections (GPRNs) may be combined onto one bill, but all the individual GPRNs should be listed.

If you are unsure, you should contact your electricity and gas supplier(s).

18.10 Our organisation pays for un-metered electricity consumption used by Public Lighting. What do we submit for this consumption?

Public lighting is mostly un-metered, with billing based on a flat rate for each lamp type based on an assumed operating regime (e.g. 4,150 dusk-to-dawn burn hours per annum).

Please submit the Group MPRNs (GMPRNs) corresponding to your organisation's public lighting bills. These are eleven digits long and start with the digit 9.

Important note

Some GMPRN-level public lighting consumption shown in the M&R system may appear to fluctuate over time in an unexpected manner. This is because of the dynamic relationship between TMPRNs and GMPRNs, as explained below.

Each unmetered public lighting connection point is allocated a Technical MPRN or TMPRN by ESB Networks. These are grouped into GMPRNs. Each GMPRN can comprise one or many TMPRNs. It is GMPRNs that must be entered into the M&R system.

The allocation of TMPRNs to GMPRNs can change over time, i.e. a particular TMPRN could be allocated to a particular GMPRN in one year, but to a different GMPRN the next year. This can give rise to apparent anomalies in GMPRN data in the M&R system when such data is analysed on a GMPRN-by-GMPRN basis, i.e. consumption may appear to increase or decrease over time as TMPRNs come into and out of scope of a specific GMPRN.

Any such anomalies should balance out when this consumption is analysed at organisation level or across all GMPRNs within a local authority's scope.

18.11 What will the Department / SEAI do with our MPRNs & GPRNs?

The Department and SEAI will access the consumption data corresponding to these MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} on an annual basis directly from the regulated electricity and gas meter operators (ESB MRSO and Gas Networks Ireland respectively). This will help build a comprehensive picture of public sector electricity and gas use.

Meter level consumption data will be made available to those organisations that submitted validated MPRNs and GPRNs.

18.12 Will we have to submit MPRNs and GPRNs every year?

No, but you will be required to validate {FAQ 18.5} your previously submitted MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2} each year.

By providing your organisation's MPRNs and GPRNs now, the Department and SEAI will be able to access your electricity and natural consumption records directly from the meter operators (ESB MRSO & Gas Networks Ireland) on an annual basis. Under normal, 'business as usual' circumstances, your organisation's MPRNs and GPRNs will not change from year to year so you will not have to submit them annually.

Your MPRNs and GPRNs will only change if your organisation occupies a new premises, vacates an existing premises or adds/changes an electricity or natural gas connection. In these circumstances, you should update your list of MPRNs and GPRNs on the system.

Remember that switching electricity or gas supplier will not affect your MPRNs or GPRNs.

18.13 What are the benefits for our organisation of submitting our MPRNs & GPRNs?

Since 1st January 2011, all public sector organisations have been required to report annually on their energy usage and actions taken to reduce consumption to comply with 426 of 2014 (and formerly S.I. 542 of 2009). By submitting your organisation's MPRNs {FAQ 18.1} & GPRNs {FAQ 18.2}, the Department and SEAI can provide you with the energy consumption data corresponding to these MPRNs and GPRNs— by sourcing it directly from the regulated electricity and gas meter operators. You have ongoing access to your meter numbers and your data through the system.

This will greatly reduce the reporting burden on your organisation by eliminating the need for you to submit your electricity and natural gas consumption annually.

The collection of this data will enable SEAI to build a suite of tools and programmes specifically targeted at public sector bodies. These can assist your organisation in reducing your energy consumption, CO₂ emissions and costs.

Having all of your MPRNs and GPRNs collated in one location makes it easier for your organisation to switch energy suppliers to potentially avail of more cost effective supply options. (Your MPRNs and GPRNs are the key data items required when switching electricity and gas suppliers respectively.)

19 LINKAGES TO OTHER REPORTING SYSTEMS

19.1 Our organisation already reports energy consumption annually – will we have to report separately for this target?

Reporting under the target will link to, and insofar as is possible, will integrate with, other existing reporting mechanisms, e.g. the EPA's Carbon Management Tool, Display Energy Certificates, Annual Reports etc.

19.2 How will the Energy Monitoring & Reporting system link to Display Energy Certificates?

The existing Display Energy Certificates system and the Energy Monitoring & Reporting system are the result of the transposition of two different European Directives into Irish legislation. They have different initiation dates and different scopes in terms of energy usage.

Since 1 January 2009, all public buildings with a gross internal floor area greater than 1,000 m² were required to display a Display Energy Certificate in a prominent place clearly visible to the public. The floor area threshold dropped to 500 m² in January 2013 and will drop again to 250 m² in January 2015. SI 243 of 2012 expands the scope of DEC's to include any non-residential buildings over certain area thresholds that are frequently visited by the public, i.e. commercial premises, which may have no connection whatsoever to the public sector.

Since 1 January 2011, public organisations are obliged to report under the new Energy Monitoring & Reporting system to satisfy SI 426 of 2014 (and formerly SI 542 of 2009). Organisations are required to report on all of their energy consumption to comply with SI 426 of 2014, whereas the focus of the Display Energy Certificates is on energy usage in buildings only.

The project team is working to integrate the two systems over time.

20 OUR ORGANISATION'S ANNUAL REPORT

20.1 From when does the obligation to include energy efficiency in our annual report apply?

The obligation to report on energy efficiency applies to all Annual Reports published from 1st January 2011 onwards.

20.2 What do we need to include in our annual report?

Only high level, organisation-level energy consumption data is required, i.e. you only need to report the total amounts of electricity, fossil fuel and renewable fuels your organisation used in the reporting year. While it would be useful to report some further breakdown of consumption by end user and fuel type, this is not required.

To facilitate the reporting process, SEAI and the Department have developed a simple Energy Consumption Calculator Tool (Uirlis Ríomhaire um Ídiú Fuinnimh.xls (size 36.4 KB)) for use in annual reports. The reporting template can be amended to fit individual circumstances. The template (including a completed sample) is available from the SEAI website.

20.3 Does it matter where in our annual report we locate the section on energy consumption?

No.

20.4 Do we have to use the reporting format shown in the SEAI template?

No. The template just shows one way of reporting the information. Different organisations may present the information differently. No matter what the format, organisations should report the following information:

- Total energy consumed in the reporting year ;
- Actions taken to date to improve energy performance;
- Planned actions.

SEAI encourages organisations that are taking initiatives and making savings to let others know about it – this is part of the exemplar role expected from public bodies under SI 542 of 2009.

20.5 What units should we report the data in?

You must report your consumption in kilowatt hours (kWh) or megawatt hours (MWh) (1 MWh = 1,000 kWh). If you wish, you may also report consumption in other units – in addition to kWh or MWh.

20.6 Do we have to report how much money we spend on energy?

No.

The option to report your energy spend is no longer be available (2015 reporting cycle onwards).

20.7 How do we convert our energy consumption from litres / tonnes (etc.) to kWh?

The Energy Consumption Calculator Tool (Uirlis Ríomhaire um Ídiú Fuinnimh.xls (size 36.4 KB)) includes conversion factors for all fuel types. Simply enter your consumption in the normally billed units (e.g. litres of diesel) and the tool will convert it to kWh.

20.8 Our organisation uses lots of different fuels. Do we have to report the energy consumption for each of them separately?

No. As a minimum, you only need to report four consumption figures:

- The total overall energy consumption for the reporting year in kWh or MWh
- The total overall Electricity consumption for the reporting year in kWh or MWh
- The total overall Fossil Fuels consumption for the reporting year in kWh or MWh.
- The total overall Renewable Energy consumption for the reporting year in kWh or MWh.

The Energy Consumption Calculator Tool (Uirlis Ríomhaire um Ídiú Fuinnimh.xls (size 36.4 KB)) gives a breakdown of different fuel types and conversion factors. It also aggregates the consumption of the different fuels into the above high level breakdown required for reporting.

20.9 What is considered renewable energy?

For the purposes of this reporting process, Renewable Energy includes wood chips, wood pellets, wood briquettes, biofuels and onsite wind & hydro generation. All commonly used sources of Renewable Energy can be inputted into the Energy Consumption Calculator Tool (Uirlis Ríomhaire um Ídiú Fuinnimh.xls (size 36.4 KB)).

20.10 What is considered a fossil fuel?

Fossil Fuels include natural gas, gasoil, fuel oils, LPG, diesel, petrol, kerosene, coal and peat. The Energy Consumption Calculator Tool (Uirlis Ríomhaire um Ídiú Fuinnimh.xls (size 36.4 KB)) can accommodate all commonly used Fossil Fuels.

20.11 Our organisation published an annual report since 1st January 2011 without including a section on energy efficiency. What should we do?

If your organisation published an Annual Report since 1st January 2011 without including a section on energy efficiency, then you should include a separate document on your website that addresses your obligations to report on energy efficiency for the period covered by the Annual Report. The document should be based on the SEAI Annual Reporting Template.

A hyperlink to this separate document should be included on the same web page as your organisation's main Annual Report(s) - adjacent to the hyperlink to your organisation's Annual Report for the corresponding period.

21 SUPPORT & NEXT STEPS

21.1 Where can we get more help on using the M&R system?

There is a comprehensive suite of guidance, help, training and support materials described on the M&R web page (<https://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>).

21.2 We have a query that's not explained in this FAQ. What should we do?

The procedure for accessing additional support is set out on the M&R web page (<https://www.seai.ie/energy-in-business/public-sector/monitoring-and-reporting/>).

Note that this FAQ will be updated continuously as new queries emerge.

21.3 We want to improve our energy performance. What help is available?

SEAI has developed a range of integrated supports to help Public Sector organisations achieve valuable energy savings and work towards what will be ambitious targets. No matter where in the public service your organisation operates, SEAI can help you reduce energy usage, cut costs and benefit the environment.

SEAI does not charge for these services. All we ask is for a genuine commitment to energy saving, which is vital to the success of your energy management efforts. The more committed an organisation is, the more SEAI can help, and the more meaningful the savings will be. If your organisation does not already have a relationship with SEAI, you should make contact now – at an organisational level.

Our services range from simple advice and online support to site energy assessments and energy management training. For organisations with larger energy spends that are willing to formally commit – at senior management level – to the 2020 targets, SEAI offers enhanced supports:

- Tailored Energy Management advice and support;
- Advanced energy assessments;
- Energy efficient design for larger projects;
- Expert advisors to guide and mentor your organisation;
- Assistance in establishing energy strategies and setting annual plans with short and long term goals to achieve the 33% target.

Information on the Public Sector Programme is available from <https://www.seai.ie/energy-in-business/public-sector/public-sector-energy-programme/>.

21.4 What should our organisation do next?

Your organisation should develop and implement a structured Energy Management Programme. This will enable you to deliver sustainable energy savings in the short term and, importantly, to

identify strategic initiatives to work towards more significant longer term savings, i.e. to 2020. SEAI can work with you to achieve these. If your organisation does not already have a relationship with SEAI, you should make [contact now](#).

You should also start to put a system in place to record your overall energy consumption on an annual basis. Such a 'system' could be as simple as a spreadsheet with consumption data copied from your bills.

21.5 How can our organisation interact with the monitoring & reporting project?

SEAI has been consulting with Public Sector organisations throughout this project.

The best way to get involved is to establish a relationship with SEAI through our range of integrated supports for the Public Sector.

21.6 Where can I find out more about Public Sector energy targets & energy efficiency obligations on Public Bodies?

- Additional information on the public sector energy efficiency targets, monitoring and reporting is available from SEAI's website at <https://www.seai.ie/energy-in-business/public-sector/>
- The *European Union (Energy Efficiency) Regulations 2014* (SI 426 of 2014) can be viewed at <http://www.irishstatutebook.ie/2014/en/si/0426.html>
- Ireland's *National Energy Efficiency Action Plan* (NEEAP) is available from the Department of Communications, Climate Action & Environment website (www.dccae.gov.ie).