

# Domestic Renewable Heat Incentive

[www.ofgem.gov.uk/drhi](http://www.ofgem.gov.uk/drhi)

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## Essential Guide to Metering & Monitoring Service Packages (MMSP)

A way to check how well your renewable heating system is performing  
Information for **applicants** and **installers**

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# Part 1 – For Applicants and Installers

## Section 1 – About this guide

### What it's about

This guide is about optional monitoring packages for the Domestic Renewable Heat Incentive (RHI). Although it involves metering, it's otherwise completely separate to having to have meters to receive payments, which some people must do to be able to join the Scheme.

Participants of the Domestic RHI can't choose to be metered for tariff payments - we'll determine whether it's required, depending on their circumstances. However, that's not the case for the Metering and Monitoring Service Package (MMSP) - the decision whether or not to install MMSP is for the applicant.

You can apply for MMSP registration at any point during the period of your participation in the RHI Scheme, including when you first apply.

If you were accredited to the scheme on or after 22 May 2018 and have a heat pump, it's a scheme requirement that you have electricity [metering for performance](#) alongside your heating system. Installing an MMSP may meet this obligation. To learn more about metering for performance and payment eligibility criterion, please read our [Essential Guide to Metering](#).

#### Also in the Essential Guides series:

[Essential Guide for Applicants](#)

[Essential Guide for Installers](#)

[Essential Guide to Metering](#)

### This guide is for you:

Please send feedback on how our guidance could be improved, or on content you'd like to see included, to [Suggestions.DomesticRHI@ofgem.gov.uk](mailto:Suggestions.DomesticRHI@ofgem.gov.uk). We update this guide regularly. Check our website for the latest version, to be sure you're reading the most up-to-date information.

### At its simplest

Having a Metering and Monitoring Service Package (MMSP) has clear advantages but it's also important for installers and applicants to understand that it must meet specific requirements, which we'll assess the package against.

Those who think they might be interested in getting one should know:

- They work like a service contract between applicant and installer.
- They provide data that the applicant and installer can use to make sure the heating system is performing as efficiently as possible, or spot issues early.
- Participants get paid small amounts extra to help cover the cost of installing and operating the package.
- After getting one, applicants apply to register it with us, and if registration is obtained we will pay them the extra amount.

For metering to receive Domestic RHI tariff payments:

- If applicants need to be metered to receive tariff payments (see our Essential Guide to Metering) an MMSP can be used to meet those requirements.
- If applicants don't need to be metered then they'll be paid on the basis of estimated heat use, even if an MMSP is installed.

## Part 2 – Information for Applicants

### Section 2 – MMSP Overview

#### Advantages of an MMSP

The advantage of a Metering and Monitoring Service Package (MMSP) is that it will help you check how well your renewable heating system is performing.

They're a good way to give you peace of mind that it's working as efficiently as your installer told you it would, to flag any performance issues to you both or to show if something has broken.

#### What it's made up of

The package includes (as a minimum) high specification heat meters, electricity meters and temperature sensors installed on the heating system. These must record data at least every two minutes, and update data at least once a month. You can see the figures and analysis when you log on to a dedicated website or Application on a hand held device such as a smartphone or tablet (the data-viewing platform). Your installer will also be able to see the data, so they can help identify any problems with how your heating system is running.

#### Who are they for?

MMSPs are only available to Domestic RHI applicants who have ground source or air source heat pumps, or biomass pellet boilers – ie those designed and installed to burn only wood pellets (not biomass pellet stoves with back boilers, or any other biomass boilers, eg ones that burn woodchips).

If you applied and/or were accredited to the scheme on or after 22 May 2018 and have a heat pump, it is an eligibility requirement that you have electricity metering for performance alongside your heating system. Depending on your heating arrangements, MMSP may be one way in which you can meet this obligation.

If you need to be metered to receive tariff payments, an MMSP can be also used to meet those requirements.

You can apply for MMSP registration at any point during the period of your participation in the RHI Scheme, including when you first apply. See our [Essential Guide to Metering](#).

#### What's the process?

- The MMSP must be installed by an [Microgeneration Certification Scheme \(MCS\)](#) certified installer
- There must be a signed agreement between you and your installer that meets specific requirements. The agreement must reflect the content in Schedule 7 in [the Annex](#) of this document. It must also state that they'll provide a continuing advice service. We have worked with the Renewable Energy Consumer Code (RECC) to provide a model agreement, which can be found on the [RECC website](#).
- You must then submit the agreement to us as part of your MMSP registration application along with a screenshot of the Energy Consumption information taken from either the dedicated website or App. For more information on how to take a screenshot see our guide in the annex at the end of this document.
- If your application and MMSP agreement meet the requirements, we will make the applicable MMSP payment along with your quarterly tariff payments to help cover some of the costs of the MMSP installation.

## Finding an MMSP and an installer

Discuss with your installer which electricity metering option is best suited for you and your heating system.

You don't need to understand the detailed technical and accuracy requirements but be sure to check that your installer is aware of them. Your installer will confirm your package meets these requirements in your MMSP agreement. Make sure they give you a copy.

## Technical information

If you're interested in checking what hardware and software an MMSP includes, see [Section 8 – What an MMSP includes](#) in the installer's part of this guide. Or refer to the [MCS Domestic RHI Metering Guidance](#) document.

**Please note:** We'll register the MMSP only if there's a valid, signed and ongoing MMSP agreement which meets all of the technical requirements.

## Section 4 – MMSP Payments

### How much extra do I get?

**1) If you are successfully registered for MMSP before 22 May 2018:**

- £230.00\* per year (£57.50 every three months) for heat pumps
- £200.00\* per year (£50.00 every three months) for a biomass pellet boiler

**2) If you successfully registered for MMSP on or after 22 May 2018:**

New MMSP registrations on or after 22 May 2018 will be able to get a lump sum payment alongside their first Domestic RHI payment, and a maximum of up to seven years of annual MMSP payments.

- a single lump sum payment of £805.00\*, and MMSP payments of £115.00\* per year (£28.75 every three months) for heat pumps
- a single lump sum payment of £700.00, and MMSP payments of £100.00 per year (£25.00 every three months) for biomass pellet boilers

If you applied for the MMSP alongside your Domestic RHI application, you would get the maximum of up to seven years of MMSP payments. If you applied for the MMSP afterwards, you'd only get payments for the remainder of the seven years, or until the MMSP agreement ended or was terminated, or registration was withdrawn by us.

### Calculation Examples

Heat pump	
You apply for MMSP at the same time (year 1) as your Domestic RHI application (year 1)	$£805 + (£115 \times 7 \text{ years}) = £1,610$
You apply for MMSP in your last year on the Domestic RHI Scheme (year 7)	$£805 + (£115 \times 1 \text{ year}) = £920$

Biomass boiler	
You apply for MMSP at the same time (year 1) as your Domestic RHI application (year 1)	$£700 + (£100 \times 7 \text{ years}) = £1,400$
You apply for MMSP in your last year on the Domestic RHI Scheme (year 7)	$£700 + (£100 \times 1 \text{ year}) = £800$

\* MMSP payments will not be adjusted in line with RPI or CPI. They remain fixed for the lifetime of the scheme

### For how long?

Once the MMSP is registered, you'll receive the extra payments every three months from that date until either (whichever is earliest):

- Domestic RHI tariff payments stop; or,
- the MMSP agreement comes to an end, is terminated, or registration is withdrawn by us.

For the payments to continue, your MMSP must operate continually over this time and the dedicated website (data platform) must continue to display the necessary information. You must also comply with your other ongoing obligations to the scheme, and the conditions in [Annex to Part 3](#) to continue to receive payments from the Domestic RHI.

### Rules and payments

#### **If you receive Domestic RHI payments based on your estimated annual heat use:**

You can't choose to be paid based on meter readings. You'll receive your top-up payment for installing and maintaining your MMSP at the same time as your tariff payments.

#### **If you submit meter readings to receive your tariff payments:**

You can use the MMSP meters to submit your meter readings. This may be particularly useful where remote meter readings are required. You'll also receive your top-up payments for installing and maintaining the MMSP.

All heating systems must meet the relevant EN standards listed in the [Domestic RHI Reference Document](#).

### Is there a limit?

There is a set maximum number of MMSP registrations. The packages are available on a first-come, first-served basis. There are 11,255 MMSP packages available in total. This limit refers to the lifetime of the scheme, not an annual limit.

## Section 4 – Applying to register for the MMSP

### Two routes

You must have everything in place when you apply to register the MMSP. You can do it either when you apply to join the Domestic RHI scheme, or at any time within your seven years' participation.

To apply when you first join the Domestic RHI scheme: Select the 'yes' option when the application form asks 'Do you have a Metering and Monitoring Service Package (MMSP)?'

Please read our [Helpsheet: Application Form Questions](#) for more detailed explanations.

To apply after you've joined the Domestic RHI scheme: You'll need to make your registration application via your [MyRHI account](#).

In both routes, you'll be presented with MMSP-specific questions such as:

- The name, address, email and telephone number of the installation company.
- The name and contact details of the MMSP provider (if different).
- The unique company reference number of the MMSP installer.
- The date the MMSP was completed and started working.
- A screenshot of the Energy Consumption information taken from either the dedicated website or App.

For either route, send a copy of your completed and signed MMSP agreement (from your MCS certified MMSP installer) to us by email, post, or you can upload it via your MyRHI account. Without it, we'll be unable to consider your registration application for your MMSP. If you don't supply the information requested within 12 weeks, your application will be rejected.

Email: [DomesticRHI@ofgem.gov.uk](mailto:DomesticRHI@ofgem.gov.uk)

Post: **Domestic RHI team, Ofgem,  
Commonwealth House, 32 Albion Street,  
Glasgow, G1 1LH**

## Section 5 – After you're registered

### Check your data

It's good practice to regularly check the data recorded by your MMSP, especially just after your new heating system has been installed. It will help you spot teething problems and optimise your setup. Your installer should be there to help you.

If you find your data is no longer being recorded, or there's a visible problem with the equipment, you should contact your MMSP installer and Ofgem. Your installer should be able to explain any issues with your data and how your heating system is performing.

In each year, your data-viewing platform must record at least 75% of the information that was possible. If it's not doing that, we might have to stop your payments, so if you're missing data you should contact your MMSP installer.

### Annual declarations

When you've registered an MMSP, as part of your [annual declarations](#) for the Domestic RHI scheme, we'll ask you to confirm it's still working and that the service contract agreed with your installer is still in place.

### Audits

As part of our audit programme we may ask for evidence that the package is still working, such as a print-out of your data. We may also choose to perform a site audit when we receive your agreement before registering your MMSP.

#### **What happens with my MMSP performance data?**

Ofgem may request Metering and Monitoring Service Package (MMSP) data on a regular basis, generally twice a year (though it could be more, or less, regularly than this). We won't assess your data at Ofgem, but we'll pass on the information about the plant's performance to the Department for Business, Energy & Industrial Strategy (BEIS). BEIS use this data to inform future research and policy development.

We'll contact you to ask you to send us this data. You'll have 28 days to comply with the request. You may wish for us to speak directly to your installer to get the data, in which case you can give us permission to speak to your installer on your behalf. If you refuse to provide the data, or if it's not sufficiently complete, we may withdraw your MMSP registration.

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## Part 3 – Information for Installers

### Section 6 – MMSP Overview

#### What is it?

MMSPs consist of high specification energy and temperature meters being installed on the heating system that must record data at least every two minutes, and log data at least once a month. This data is then pulled together and presented on a data-viewing platform (eg a website accessed via a computer, laptop, tablet or smartphone).

The aim is to help Domestic RHI participants and industry understand how well their renewable heating installations are operating and to aid in optimising performance.

#### The process

To install an MMSP you must be an MCS certified installer. There must be a signed 'Agreement' in place between the MCS MMSP installer and the Domestic RHI applicant. It must state you'll provide a continuing advice service, plus confirmation all the meters, sensors and equipment meet the specific accuracy and technical requirements as per the [Domestic RHI Regulations](#) and the [MCS Domestic RHI Metering Guidance](#) document. The MMSP service agreement with your installer must reflect the content in Schedule 7 in the [Annex](#) of this document.

The applicant must then apply to register the MMSP with us. We'll only register it if there is a valid, signed and ongoing 'Agreement' for the whole period of registration (until Domestic RHI payments stop) and certain other conditions are met. If your customer registers their MMSP at the same time they apply for their heating system, and satisfy all other eligibility and ongoing obligation criteria, they'll receive the maximum of seven years' worth of MMSP payments.

#### Who they are for

MMSPs are only available to Domestic RHI applicants using:

- Air source or ground source heat pumps
- Biomass pellet boilers (not biomass pellet stoves with back boilers, any other biomass stoves or any other biomass boilers, eg those that burn woodchips).

If your customer was accredited to the scheme on or after 22 May 2018 and they have a heat pump, it's an eligibility requirement that they have [metering for performance](#) alongside their heating system. Depending on your heating arrangements, MMSP may be one way in which they can meet this obligation.

If your customer needs to be [metered for payment](#) to receive tariff payments, an MMSP can be also used to meet these requirements.

#### The 'Agreement'

Details of what is required in the signed 'Agreement', plus the associated technical requirements, are in the annex. The MMSP service agreement with your installer must reflect the wording of Schedule 7 which is detailed in the [Annex](#) of this document.

We have worked with the Renewable Energy Consumer Code (RECC) to provide a model agreement, which can be found at [their website](#).

As part of the MMSP agreement, the platform must store your customers' data for at least 12 month.

## Section 7 – MMSP payments

### Payment amount

If your customer applied for the MMSP alongside their Domestic RHI application, they would get the maximum of seven years of MMSP payments.

If your customer applied for the MMSP afterwards, they would still get the lump sum payment but only the remainder of annual MMSP payments of the seven years or until the MMSP agreement ended or was terminated or registration was withdrawn by us

#### 1) If your customer successfully registered for MMSP before 22 May 2018 :

- £230.00\* per year (£57.50 every three months) for heat pumps
- £200.00\* per year (£50.00 every three months) for a biomass pellet boiler

#### 2) If your customer successfully registered for MMSP on or after 22 May 2018:

New MMSP registrations on or after 22 May 2018 will be able to get a lump sum payment alongside their first Domestic RHI payment, and a maximum of up to seven years of annual MMSP payments.

- a single lump sum payment of £805.00\*, and MMSP payments of £115.00\* per year (£28.75 every three months) for heat pumps
- a single lump sum payment of £700.00\*, and MMSP payments of £100.00 per year (£25.00 every three months) for biomass pellet boilers

**For heat pumps**, your customer would receive a single lump sum payment of £805 plus payments of £115 per year (£28.75 every three months). For example:

Heat pumps	
Your customer applies for MMSP at the same time (year 1) as their Domestic RHI application (year 1)	$£805^* + (£115 \times 7 \text{ years}) = £1,610$
Your customer applies for MMSP in their last year on the Domestic RHI Scheme (year 7)	$£805^* + (£115 \times 1 \text{ year}) = £920$

**For biomass boilers**, your customer would receive a single lump sum payment of £700.00 plus payments of £100.00\* per year (£25.00 every three months). For example:

Biomass boiler	
You apply for MMSP at the same time (year 1) as your Domestic RHI application (year 1)	$£700^* + (£100 \times 7 \text{ years}) = £1,400$
You apply for MMSP in your last year on the Domestic RHI Scheme (year 7)	$£700^* + (£100 \times 1 \text{ year}) = £800$

\* MMSP payments will not be adjusted in line with RPI or CPI. They remain fixed for the lifetime of the scheme

## Payment period

Once an MMSP is registered, your customer will receive an ongoing payment from the date it was registered until the end of their Domestic RHI payments (or until the MMSP agreement ends). To continue to receive it, the MMSP must operate constantly over this time and the data platform must always display the necessary information. Each year, it must record **at least 75%** of the information that was possible.

## When to register

An applicant can apply to register the MMSP at the same time as they apply to the Domestic RHI scheme, or at any time during their seven years participation in the scheme. They'll only receive MMSP payments until their RHI payments stop.

## MMSP limit

There is a limit which allows only a certain number of MMSP registrations. There are 11,255 in total, available on a first-come, first-served basis. This limit refers to the lifetime of the scheme, not an annual limit.

## Metering status

### **Non-metered for payment applicants:**

Where the participant normally receives a Domestic RHI payment based on their estimated heat demand (known as deeming), they'll continue to do so and will also receive an extra payment for installing and maintaining the MMSP. The MMSP meters are for information only and do not affect tariff payments.

### **Metered for payment applicants:**

**Metered** for payment applicants can use the MMSP meters for their meter reading submissions to receive tariff payments and will also receive the extra payment for installing and maintaining the MMSP. This may be particularly useful where remote meter readings are required.

### **Metered for performance applicants:**

If your customer applied to the scheme on or after 22 May 2018 and has a heat pump, it's an eligibility requirement that they have [metering for performance](#) alongside their heating system. Depending on their heating system, MMSP may be one way in which they can meet this obligation.

## Section 8 – What an MMSP includes

### Hardware components

- Heat meter(s) to meter heat output from the biomass boiler/heat pump. More than one heat meter may be needed depending on the number of flow/return pipes entering/exiting the installation. Or, where one heat meter cannot be installed immediately, where flow/ return pipework exits the installation before the pipes diverge to feed different heating circuits.
- Heat meter(s) to meter the heat output of any additional heaters that are connected to the same heat distribution system. If the heat output cannot be recorded, the fuel or electrical input into these heaters must be metered instead.
- Electrical meter(s) to meter all electrical supplies feeding the installation.
- Electrical meter(s) to meter any electrical input to immersion heaters used for the DHW.
- Gas meter to measure any fuel input into a gas boiler where the gas boiler is connected to the same heat distribution system, but the heat output cannot be metered. Or gas meter to measure any fuel input into a heat pump where it is a hybrid product.
- Oil meter to measure any fuel input into an oil boiler where the oil boiler is connected to the same heat distribution system, but the heat output cannot be metered.
- Electricity meter to measure any input into an electric heater (including boilers) where the electric heater is connected to the same heat distribution system but the heat output cannot be metered.
- Temperature sensor to measure internal room temperature.
- Temperature sensor to measure space heating flow temperature (the temperature sensor incorporated into the heat meter can be used instead of a separate temperature sensor).
- Temperature sensor to measure DHW flow temperature (the temperature sensor incorporated into the heat meter can be used instead of a separate temperature sensor).
- (GSHPs only) Temperature sensors to measure ground loop flow and return temperatures.
- (ASHPs and Biomass installations only) Temperature sensor (or data from a weather station within a 50 mile radius) to measure external air temperature.
- Temperature sensor to measure the indoor air temperature (for all installations).
- (Biomass installations only) Pellet counter to enable biomass fuel input to be calculated, enabling the boiler efficiency to be calculated (alternatively this could be done using flue gas analysis).

### Software components

- Data logger (connected via sim card, WiFi or Ethernet).
- A data platform to be able to store the data transmitted by the data logger.
- A computer (or similar) to access the logged data.
- The data platform must be able to provide a percentage figure of the completeness of the recorded information from all the meters and sensors included in the MMSP.

### Technical specifications

In addition to the above, all the various meters and sensors must meet high accuracy requirements as detailed in the following tables for pellet biomass boilers and for heat pumps respectively (refer to the [MCS Domestic RHI Metering Guidance](#)).

### Contact us

If you want to discuss the requirements before you install an MMSP for the first time. Call **0300 003 0744** or email:

[DomesticRHI@ofgem.gov.uk](mailto:DomesticRHI@ofgem.gov.uk) and put 'MMSP' in the subject line.

## Biomass boiler MMSP summary table

<b>Biomass boiler</b>					
	<b>Sensor Type</b>	<b>Minimum Resolution</b>	<b>Minimum Accuracy</b>	<b>Example Number Required</b>	<b>When Needed</b>
<b>1</b>	Heat metering of heat output from biomass boiler and heat metering of any additional heaters that are connected to the same heat distribution system.	[Resolution of heat meter] $\leq 3\%$ multiplied by [min. non-zero heat output in 2 minutes] AND heat meter resolution need not be finer than 1Wh See the <a href="#">MCS Domestic RHI Metering Guidance Document</a> for more details.	Class 3 of Measuring Instruments Directive	1x heat meter for 2-pipe output; 2x, 3x or 4x heat meters depending upon whether it is a 3-pipe, 4-pipe etc unit; An additional heat meter required where overall system contains a fossil fuel boiler in addition to the above.	Always: a minimum of one heat meter always required.
<b>2</b>	Metering of all electrical supplies to biomass boiler included in heat measurement plus domestic hot water (DHW) cylinder where this is supplied by biomass boiler (in addition, we recommend that all integrated electric heaters are metered).	[Resolution of electricity meter] $\leq 7.5\%$ multiplied by [min. non-zero electricity input in 2 minutes] (we recommend using high resolution meters but electricity meter resolution need not be finer than 1Wh).	Class A of Measuring Instruments Directive	1x electricity meter for biomass unit + 1x electricity meter for immersion heating where appropriate	Always: a minimum of one electricity meter always required.
<b>3</b>	Gas metering of gas inputs to biomass boiler where required (see Alternative Metering Arrangements section of Metering for Payment part of guidance and section 7.2 of <a href="#">MCS Domestic RHI Metering Guidance</a> document).	10 litres or equivalent for other units	Class 1.5 of Measuring Instruments Directive	1x gas meter to monitor gas input to biomass boiler (if a hybrid system has integrated gas boiler) only if not possible to meter heat output from gas boiler as in Row 1.	Only if appropriate: if an additional gas boiler is used on the system and the heat output alone cannot be metered.

	<b>Sensor Type</b>	<b>Minimum Resolution</b>	<b>Minimum Accuracy</b>	<b>Example Number Required</b>	<b>When Needed</b>
4	Oil metering of any oil inputs to biomass boiler where required (see Alternative Metering Arrangements section of Metering for Payment part of guidance and or section 7.2 of <a href="#">MCS Domestic RHI Metering Guidance</a> document).	0.1 litres or equivalent for other units	Class 1 of Measuring Instruments Directive	1x oil meter to monitor oil input to biomass boiler (if a hybrid system has integrated gas boiler) only if not possible to meter heat output from oil boiler as in Row 1.	Only if appropriate: if an additional oil boiler is used on the system and the heat output alone cannot be metered.
5	Measurement of indoor temperature + flow and return temperatures at approximate location of heat meter (Note that this could be conducted using the temperature sensor components of a heat meter).	We recommend 0.1 degrees C	We recommend Class B for Resistance Temperature Detectors (RTDs) (equivalent accuracy for other types of temperature sensor at typical measurement temperature).	3x temperature sensors	Always: Indoor air temperature sensor plus flow and return temperature sensors of hot water exiting/returning to the biomass boiler.
6	Measurement of external air temperature.  This sensor should be suitably sited out of direct sunlight and away from other heat sources.	We recommend 0.1 degrees C	We recommend Class B for RTDs (equivalent accuracy for other types of temperature sensor at typical measurement temperature).	1x temperature sensor	Always
7	Efficiency An estimate of efficiency should be provided based on metered fuel input (through measurement of auger revolutions or similar) or flue gas analysis.		This should be done as accurately as possible. We recommend better than 20%	-	Always

## Heat pump MMSP summary table

Heat pump					
	Sensor Type	Minimum Resolution	Minimum Accuracy	Example Number Required	When Needed
1	Heat metering of heat output from heat pump and heat metering of all additional heaters that are connected to the same heat distribution system.	[Resolution of heat meter] $\leq 3\%$ multiplied by [min. non-zero heat output in 2 minutes] AND heat meter resolution need not be finer than 1Wh (see Section 7.1)	Class 3 of Measuring Instruments Directive	1x heat meter required for heat pump with 2-pipe output 2x heat meters required for heat pump with 4-pipe or 3-pipe output or bivalent system with 2-pipe heat pump 3 x heat meters required for bivalent system with 4-pipe or 3-pipe heat pump (Fewer meters may be used if manufacturer has integrated metering to their unit.)	Always: a minimum of one heat meter always required.
2	Metering of all electrical supplies to heat pump included in heat measurement plus domestic hot water (DHW) cylinder where this is supplied by heat pump (In addition, we recommend that all integrated electric heaters are metered).	[Resolution of electricity meter] $\leq 3\%$ multiplied by [min. non-zero electricity input in 2 minutes] (We recommend using high resolution meters but electricity meter resolution need not be finer than 1Wh).	Class A of Measuring Instruments Directive	1x electricity meter where heat pump is incorporated into single unit 2x electricity meter where heat pump is composed of two units. + 1x electricity meter for immersion heating where DHW is supplied by heat pump.	Always: a minimum of one electricity meter always required.
3	Gas metering of inputs to heat pump where required (see Section 7.1 of the <a href="#">MCS Domestic RHI Metering Guidance</a> document).	10 litres or equivalent for other units	Class 1.5 of Measuring Instruments Directive	1x gas meter to monitor gas input to biomass boiler (if a hybrid system has integrated gas boiler) only if not possible to meter heat output from gas boiler as in Row 1.	Only if appropriate: if an additional gas boiler is used on the system and the heat output alone cannot be metered.

	<b>Sensor Type</b>	<b>Minimum Resolution</b>	<b>Minimum Accuracy</b>	<b>Example Number Required</b>	<b>When Needed</b>
<b>4</b>	Oil metering of any oil supplied to heat pump where required (see Section 7.1 of the <a href="#">MCS Domestic RHI Metering Guidance</a> document).	0.1 litres or equivalent for other units	Class 1 of Measuring Instruments Directive	1x meter to monitor oil input to heat pump (if a hybrid system has integrated gas boiler) only if not possible to meter heat output from oil boiler as in Row 1.	Only if appropriate: if an additional oil boiler is used on the system and the heat output alone cannot be metered.
<b>5</b>	Measurement of internal temperature, space heating flow temperature and DHW flow temperature, where this is supplied by the heat pump. (sometimes this may need to be separate to temperature measurements involved in heat metering).	We recommend 0.1 degrees C /	We recommend Class B for Resistance Temperature Detectors (RTDs) (equivalent accuracy for other types of temperature sensor at typical measurement temperature).	3x temperatures sensors - includes space heating flow metering, DHW flow metering (where DHW supplied by heat pump), internal temperature.	Always: Indoor air temperature sensor plus flow and return temperature sensors of hot water exiting/returning to the heat pump.
<b>6</b>	For ground-source heat pumps (GSHPs), measurement of ground loop flow and return temperatures.	We recommend 0.1 degrees C	We recommend Class B for RTDs (equivalent accuracy for other types of temperature sensor at typical measurement temperature).	2x temperature sensors for ground loop flow and return	Only if appropriate: ie only necessary if a GSHP
<b>7</b>	For air-source heat pumps (ASHPs) only, measurement of external air temperature. This sensor should be suitably sited out of direct sunlight and away from other heat sources.	We recommend 0.1 degrees C.	We recommend Class B for RTDs (equivalent accuracy for other types of temperature sensor at typical measurement temperature).	1x temperature sensors (air source heat pumps only).	Only if appropriate: ie only necessary if a ASHP.

## Section 9 – Installer requirements

### MCS certification

You must be MCS certified. If you install an MMSP that's not provided by your company, a sub-contract must be in place between you and the MMSP service provider whose package you're installing. All sub-contracts must meet the MCS 001 requirement standard.

The MMSP must include, as a minimum, the hardware and software listed. See the [MCS Domestic RHI Metering Guidance](#) for more details.

### The 'Agreement'

You must provide your customer with a signed 'Agreement' including evidence that the MMSP meets the high specification technical and accuracy requirements. This will reassure them the MMSP meets the technical requirements specified in the MCS Domestic RHI Metering Guidance Document. Also, you'll provide ongoing advice if the equipment malfunctions, or if data is not being recorded properly. The MMSP Agreement must reflect the content in Schedule 7 in [the Annex](#) of this document.

We have worked with the Renewable Energy Consumer Code (RECC) to provide a model agreement, which can be found at [www.recc.org.uk/members/mmsp](http://www.recc.org.uk/members/mmsp).

This 'Agreement' must be in place when the participant registers for the MMSP, and throughout participation in the Domestic RHI, for your customer to receive payments.

The MMSP payments will be paid up until the Domestic RHI payments stop; a maximum of seven years, or until the MMSP agreement ended or was terminated, or registration was withdrawn by us.

As part of the MMSP agreement, the platform must store your customers' data for at least 12 months. Full details of MMSP agreement requirements can be found in [the Annex](#) of this document.

### Contact Us

If you want to discuss the requirements before you install an MMSP for the first time, call **0300 003 0744** or email:

[DomesticRHI@ofgem.gov.uk](mailto:DomesticRHI@ofgem.gov.uk) and put '**MMSP**' in the subject line.

## Section 10 – After you’ve installed the MMSP

### When your customer applies

At the registration process, you must have provided the applicant with the necessary agreement and access to the dedicated website and or mobile application. This will allow the applicant to provide the required information needed to apply for the scheme. You must also confirm that applicable measuring instruments, sensors, and meters are installed accurately according to Schedule 7 in [the Annex](#) of this document. They will also need the name and contact details of your MCS-certified organisation, including the unique company reference number for the MMSP. This should all be included as standard in the model MMSP agreement.

### After your customer applies

You must, on request from your customer, check their data every three months as a minimum, and explain the meaning of the data collected. You must identify any issues relating to the MMSP Agreement. You must ensure the data completeness of the information recorded by the meters and sensors doesn't drop below 75% for any consecutive 12 month period. For full details of MMSP requirements, please see Schedule 7 in the annex of this document.

You should maintain the agreement between you and your customer for the duration of the registration of the MMSP – the remaining period for which they'll receive Domestic RHI tariff payments.

If we believe the agreement is not being complied with, we can withdraw the registration of MMSP and your customer will stop receiving their additional payments.

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## Annex to Part 2: Guide to taking a screenshot

### Section 1: What should be in the screenshot?

**Step 1:** Log into the dedicated website or mobile application connected to the MMSP installation.

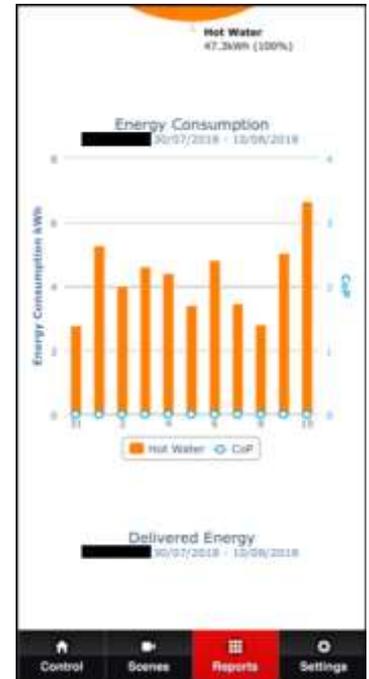
**Step 2:** Navigate to the Energy Consumption page/ section.

**Step 3:** Scroll to the graph/ pie chart that shows energy consumption (see Fig. 1)

**Step 4:** Take screenshot

In the following sections, we provide guidance on how to do this, whether you have a tablet, android phone, iPhone or PC.

**Fig. 1:** Portal screenshot, 'Energy Consumption/ Delivered Energy'



### Section 2: How to take a screenshot on a tablet or phone

The method varies slightly from one model to the next, however, the following method should work on most Android phones running Android.

1. Press the Power button and Volume down key at the same time.
2. Hold them down until you hear an audible click, or a screenshot sound.
3. You will get a notification that your screenshot was captured, and that you can share or delete it.
4. By default, your screenshots are saved in your Photos or Gallery app in a separate Screenshots folder (see Fig 2.)

For help on how to capture a screenshot on your **iOS device** please follow the steps on <https://support.apple.com/en-us/HT200289>

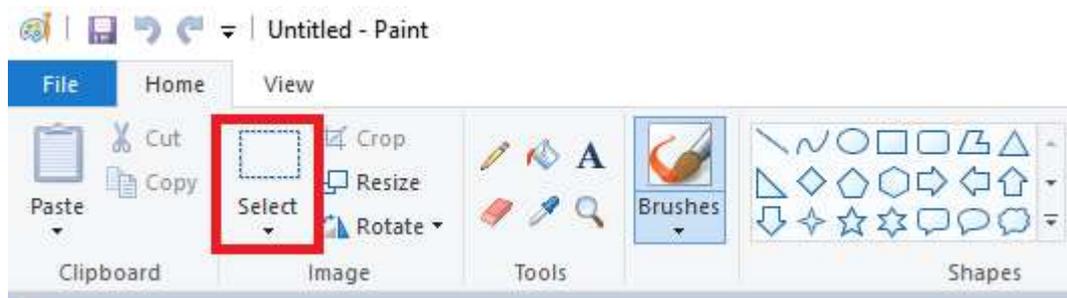
For **other android devices** the following may be helpful: <https://www.samsung.com/uk/support/mobile-devices/how-do-i-take-a-screenshot-on-my-samsung-galaxy-device/>



**Fig. 2:** Photo Albums, 'Screenshots'

## Section 2: How do I take a screenshot on my PC

1. Press the Alt and Print Screen buttons. The Print Screen button may appear as "PrtScn". This will take a screenshot window you're currently using. Your screenshot has been saved to the 'clipboard'. Make sure you follow the next steps before doing anything else.
2. Open Microsoft Paint (the programme on your computer) and press the Ctrl and V buttons together. This will paste your screenshot from the clipboard.
3. Press the button that says Select. Use this to draw an outline around the part of the screenshot you'd like to keep.



When done, click the button that says 'Crop' next to it. This will crop out everything you don't want from the original picture.

4. Save the document to a folder of your choice.

## Annex to Part 3: The regulations

### Regulatory requirements for the MMSP agreements

#### SCHEDULE 7

#### Requirements for metering and monitoring agreements (relates to regulations 49 to 52, 54, 54A, 54B and 55)

1.

The requirements set out in this Schedule are that an agreement between a certified installer and a participant (a 'metering and monitoring agreement')—

- a. relates to an accredited domestic plant which is a heat pump or a metering and monitoring biomass boiler;
- b. meets the requirements set out in paragraph 3 or 4 of this Schedule (whichever is applicable to the type of plant); and
- c. meets the requirements set out in paragraphs 5 to 12 of this Schedule.

2.

In this Schedule—

'data completeness', in relation to information recorded by measuring instruments over a particular period and presented in a format available for viewing by the installer and participant, is the total number of readings by the instruments and presented over that period divided by the maximum number of readings that could have been recorded at 2 minute intervals by the instruments in that period, expressed as a percentage;

'external temperature' is the temperature measured—

- a. at the RHI property by any temperature sensors if the relevant sensors are installed at the RHI property; or
- b. at a meteorological station which the metering and monitoring installer regards as most likely to measure temperature that represents the external temperature at the RHI property.

#### Requirements regarding the use of meters and other measuring instruments for metering and monitoring biomass boilers

3.

Where the agreement relates to an accredited domestic plant which is a metering and monitoring biomass boiler ('the plant'), the applicable requirements referred to in paragraph 1(b) are that the agreement requires that—

- a. eligible heat meters are installed to record the heat generated by the plant;
- b. eligible heat meters are installed to record the heat generated by any other plant which is connected to the same heat distribution system as the plant or, if it is not feasible to install eligible heat meters for this purpose, any other type of eligible meters which can be used to determine heat generated by the other plant are installed;

- c. temperature sensors are installed which enable the recording of the temperature of the liquid leaving the plant and returning to it, and those temperature sensors must form part of the eligible heat meter measuring the heat generated by the plant or be installed at the same location as that eligible heat meter;
- d. eligible electricity meters are installed to record—
  - i. the electricity supplied to any component of the plant which is used to generate the heat which is recorded under sub-paragraph (a); and
  - ii. if the plant is used to generate heat for the purpose of heating domestic hot water, the total electricity supplied to the domestic hot water system including the electrical consumption by any immersion element in a domestic hot water cylinder;
- e. temperature sensors are installed to measure—
  - i. the indoor temperature in at least one room in the RHI property to which the accredited domestic plant provides heat; and
  - ii. the external air temperature; and
- f. measuring equipment is installed to determine the efficiency of the plant.

**Requirements regarding the use of meters and other measuring instruments for heat pumps**

4.

Where the agreement relates to an accredited domestic plant which is a heat pump ('the plant'), the applicable requirements referred to in paragraph 1(b) are that the agreement requires that—

- a. eligible heat meters are installed to record the heat generated by the plant or its components;
- b. eligible heat meters are installed to record the heat generated by any other plant which is connected to the same heat distribution system as the plant or, if it is not feasible to install eligible heat meters for this purpose, any other type of eligible meters which can be used to determine heat generated by the other plant are installed;
- c. temperature sensors are installed which enable the recording of—
  - i. the temperature of the liquid leaving the plant to provide space heating; and
  - ii. if the heat pump generates heat for the purpose of heating domestic hot water, the temperature of the liquid leaving the plant for the sole purpose of heating domestic hot water or entering the domestic hot water cylinder;
- d. eligible electricity meters are installed to record—
  - i. any electricity supplied to any components of the plant included in the heat recorded under sub-paragraph (a);
  - ii. if the plant is used for the purpose of heating domestic hot water, the total electricity supplied to the domestic hot water system including the electrical consumption by any immersion element in a domestic hot water cylinder;
- e. temperature sensors are installed to measure the indoor temperature in at least one room in the RHI property to which the plant provides heat;
- f. if the plant is a ground source heat pump, temperature sensors are installed to record the temperature of the liquid in the part of the plant that extracts heat from the ground or water as it enters, and returns from, the ground or water; and

- g. if the plant is an air source heat pump, temperature sensors are installed to measure the external air temperature.

### **Accuracy requirements for meters and temperature sensors**

5.

The requirements referred to in paragraph 1(c) are that the agreement requires that—

- a. all meters installed or used under the agreement meet the metering requirements and records information at least every 2 minutes;
- b. all temperature sensors used under the agreement are properly installed and records information at least every 2 minutes;
- c. the smallest amount of energy that eligible heat meters used under the agreement can detect is equal to or less than 1 Wh or, if not, is equal to or less than—
  - i. 10 Wh, if the eligible heat meter is measuring the heat in domestic hot water as it leaves a domestic hot water cylinder; or
  - ii. 3% of the smallest amount of heat that the plant being measured is designed to produce in two minutes in Wh, if the eligible heat meter is not measuring the heat in domestic hot water as it leaves a domestic hot water cylinder;
- d. the smallest amount of energy that eligible electricity meters used in relation to the components of a heat pump under the agreement can detect is equal to or less than—
  - i. 1 Wh; or
  - ii. 3% of the smallest amount of electricity that the heat pump compressor, any supplementary electric heater and any electric immersion heater (where the energy consumed by those components is metered) is designed to consume in Wh in two minutes;
- e. the smallest amount of energy that eligible electricity meters used in relation to the components of a heat pump under the agreement can detect is equal to or less than—
  - i. 1 Wh; or
  - ii. 7.5% of the smallest amount of electricity that the metering and monitoring biomass boiler is designed to consume in Wh in two minutes; the smallest volume that eligible gas meters used under a metering and monitoring agreement can detect is equal to or less than 10 litres or the equivalent volume in any other unit;
- f. the smallest volume that eligible gas meters used under a metering and monitoring agreement can detect is equal to or less than 10 litres or the equivalent volume in any other unit;
- g. the smallest volume that eligible oil meters used under a metering and monitoring agreement can detect is equal to or less than 0.1 litres or the equivalent volume in any other unit; and
- h. the data completeness of the information recorded by all measuring instruments under the metering and monitoring agreement over any consecutive 12 month period is at least 75%.

### **Requirements for presentation of information**

6.

The requirements referred to in paragraph 1(c) are that the agreement requires that information recorded under the metering and monitoring agreement is —

- a. presented in a format which is automatically available for viewing by the metering and monitoring installer ('the installer view') and the participant ('the participant view'); and
- b. updated automatically
  - i. where registration is given on or after the third relevant date, within one month of that information being recorded by the relevant measuring instruments; or
  - ii. where registration is given before the third relevant date, within one week of that information being recorded by the relevant measuring instruments.

The requirements referred to in paragraph 1(c) are that the agreement requires that the installer view—

- c. includes all of the information recorded by all measuring instruments required under the metering and monitoring agreement over a period which is—
  - i. at least the past 12 months; or
  - ii. if the agreement has been in force for less than 12 months, the period in which the agreement has been in force;
- d. shows the data as it was recorded in 2 minute intervals or smaller intervals;
- e. indicates the data completeness of the recorded information—
  - i. in each three month period for the past 12 months; or
  - ii. if the information has been recorded for a period which is shorter than 12 months, in any three month period for which information has been recorded.

7.

The requirements referred to in paragraph 1(c) are that the agreement requires that the participant view—

- a. separately identifies, as a minimum, each of the following sets of information recorded under the metering and monitoring agreement —
  - i. the energy output of the accredited domestic plant;
  - ii. the energy consumption by the accredited domestic plant;
  - iii. the internal temperature in any room for which the internal temperature is recorded;
  - iv. the external temperature;
  - v. if the accredited domestic plant is a ground source heat pump, the temperature of the liquid in the part of the plant that extracts heat from the ground or water as it enters, and returns from, the ground or water;
  - vi. the efficiency of the accredited domestic plant over the past 12 months or over any period for which data is available if less than 12 months of data is available ('the efficiency assessment');
  - vii. an assessment as to the accuracy of the efficiency assessment; and
  - viii. information about the components of the accredited domestic plant which have contributed to the efficiency assessment;
- b. displays the information referred to in sub-paragraph (a) in a way that—

- i. shows the information collected in the immediately preceding week, broken down by hour or by a smaller unit of time; and
- ii. shows the information collected in any other period (at least for data collected in the previous 12 months), broken down by month or by a smaller unit of time; and
- c. identifies the data completeness of the information recorded by the measuring instruments.

#### **Requirements for provision of information and advice to participants**

8.

The requirements referred to in paragraph 1(c) are that the agreement requires the metering and monitoring installer to provide to the participant, on request—

- a. at least once every three months, an explanation about the meaning of the information collected under the metering and monitoring agreement;
- b. all of the information collected under the metering and monitoring agreement over the 12 month period ending on the date on which the information is requested; and
- c. any other information relating to the participant or the metering and monitoring agreement which is held by the metering and monitoring installer.

#### **Requirements for provision of information to the Secretary of State or the Authority**

9.

The requirements referred to in paragraph 1(c) are that the agreement requires the metering and monitoring installer—

- a. to provide to the Secretary of State, the Authority or an agent nominated by the Authority, on request, information relating to—
  - i. the metering and monitoring agreement including any data collected, and anything else done, under that agreement; or
  - ii. the accredited domestic plant'
- b. to provide that information in such manner and form and by such date as is specified in the request.

#### **Consumer protection requirements**

10.

The requirements referred to in paragraph 1(c) are that the agreement requires the metering and monitoring installer to inform the participant—

- a. of the identity of any person who is providing a service under the metering and monitoring agreement and to notify the participant if that person changes;
- b. if any service required under the metering and monitoring agreement is to be delivered by another person on behalf of the metering and monitoring installer.

11.

The requirements referred to in paragraph 1(c) are that the agreement permits assignment of all rights and obligations under the agreement—

- a. by the metering and monitoring installer to another certified installer if the participant consents; and
- b. by the participant who entered into the metering and monitoring agreement to another owner of the accredited domestic plant where—
  - i. the participant ceases to be the owner of the accredited domestic plant; and
  - ii. notice is given to the metering and monitoring installer.

## Guidance

We regularly update our guidance. Check the website for the latest versions, to be sure you're reading the most up-to-date information.

### See our website:

[Domestic RHI](#)      [Non-Domestic RHI](#)

### Domestic RHI Factsheets

[Factsheet: The Renewable Heat Incentive – Domestic or Non-Domestic?](#)  
[Factsheet: A Metering and Monitoring Service Package for the Domestic RHI](#)  
[Factsheet: Tariffs and Payments](#)  
[Factsheet: Do I Need Metering?](#)

### Domestic RHI Essential Guides

[Essential Guide for Applicants](#)  
[Essential Guide for Installers](#)  
[Essential Guide to Metering](#)

[Essential Guide to Metering and Monitoring Service Package \(MMSP\)](#)

### Domestic RHI Reference Document

[Domestic RHI Reference Document](#)

## Find out more

### Next steps

See the Department for Business, Energy & Industrial Strategy (BEIS)

[Domestic RHI Payment Calculator](#)

Ask your installer to fill out and give to you:  
[Installer Checklist](#)

## For Help

For further information on the Domestic RHI Scheme and its eligible technologies, visit the Energy Saving Trust website:

### (England and Wales)

<http://www.energysavingtrust.org.uk/>

### (Scotland)

<http://www.energysavingtrust.org.uk/scotland/home-energy-scotland>

Residents of Scotland can call **Home Energy Scotland** for free, expert advice: **0808 808 2282** (Calls are free from landlines and most mobile networks)

## For consumer protection information

### Renewable Energy Consumer Code (RECC)

[www.recc.org.uk](http://www.recc.org.uk)

### The Home Insulation and Energy Systems Contractors Scheme (HIES)

[www.hiesscheme.org.uk](http://www.hiesscheme.org.uk)

### The Glass and Glazing Federation (GGF)

[www.ggf.org.uk](http://www.ggf.org.uk)

## If you need help with a Domestic RHI application:

### Domestic RHI Applicant Support Centre

Telephone: **0300 003 0744**

Email: [DomesticRHI@ofgem.gov.uk](mailto:DomesticRHI@ofgem.gov.uk)

For opening hours, please see [our website](#).

London  
10 South Colonnade  
Canary Wharf  
London E14 4PU  
Tel: 020 7901 7000

Glasgow  
Commonwealth House  
32 Albion Street  
Glasgow G1 1LH  
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[www.ofgem.gov.uk](http://www.ofgem.gov.uk)