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Electric meters or energy meters as they are also known are installed in pretty much every home or commercial premises in the country that has a connection to the electrical grid.The meter is used to calculate how much electricity has been used or consumed by the occupants of the premises to power appliances such as TV's, fridges, freezers and other household goods so that their energy supplier can charge for what's been used.The meter itself measures electrical usage in "units". With most meters, one unit of electricity consumed is equal to one kilowatt hour (or kWh for short) or if 1000 watts of power is drawn consistently over the period of one hour, this equals 1 kWh or 1 unit.How to Read an Electric MeterThere are several different types of electrical meter installed in homes in the UK and each needs to be read a slightly different way:How to Read a Standard Electric MeterReading a standard electric meter to give your energy supplier a meter reading is a straightforward job. All you have to do is provide your supplier with the numbers in black or on a black surround, reading them from left to right.You may also notice that there are numbers in red or on a red background. These are effectively decimals and can be safely ignored as your supplier is only interested in the whole numbers.Standard electric meter and kWh usage numbersHow to Read a Dial Electric MeterThese are arguably the trickiest types of electric meters to read due to the number of dials and the direction in which each dial is read. This is normally the part that catches people out.Each dial alternates in terms of which direction it's read in. Most meters start with the first dial on the left being read in a clockwise direction and the next one to it's right being read in an anti-clockwise direction and so on.Essentially, the first, third and fifth dials are read clockwise, while the second and fourth dials are read anti-clockwise.A good indicator in terms of which way the dial should be read is which way the numbers around the face run. If they run clockwise, then read the dial clockwise, but if they run anti-clockwise, read the dial in an anti-clockwise direction.Each dial will run all the way around from 0 to 9, at which point it then starts again.There are also a few rules to be aware of when reading the dials:Always start with the dial furthest to the left and then read across to the rightIf the dial hand falls between two numbers go with the lowest number e.g. if it falls half way between 8 and 9, go with 8If the dial hand falls between 0 and 9 on any dial then always go with the 9If you have a reading of 9 on any of the dials then you will need to reduce the reading of the dial to it's left by 1 e.g. if the fourth dial reads 9 and the third dial to its left reads 3, this numbers needs reducing to 2You don't need to record the last dial. These are normally coloured red or labeled 1/10Older style electric meter dial read outHow to Read an Electronic or Digital Electric MeterAgain, as with the standard electric meter, the digital meter is easy to read. On the digital LCD display, record all of the numbers to the left of the decimal point including any zero values.Any numbers to the right of the decimal point can be safely ignored.Digital electric meter with digital usage read outHow to Read Economy 7 and Economy 10 Electric MetersAs we have discussed above, Economy 7 and Economy 10 meters feature two displays if their the older type mechanical meters or if you have a digital meter, there will be a meter view select button on the meter itself which will simply alternate between reading views.If there is any mention of "multirate" on the meter housing then you can be sure that the digital meter you are dealing with is indeed an economy 7 or 10 meter. However, if it mentions single rate then it's simply a standard digital meter on a standard tariff.If you've established your digital meter is indeed a multi-rate meter then you will need to supply two meter readings to your supplier – your on-peak and off-peak readings.Most digital multi-rate meters will simply alternate their display to show either the on-peak or off-peak reading. If you watch it for long enough you should see it change.The given reading you are viewing will be signified by the small number to the left of the actual reading – either 1 or 2Simply note down each reading onto a piece of paper and then transfer them to your suppliers chosen method of capturing the readings. In most cases, this will be an online portal of some kind.In the case that you have an older mechanical meter, both readings should be displayed and easy to see. Simply note each one down and transfer them to your supplier for billing.Economy 7 electric meter showing dual mechanical read outsHow to Read a Prepayment Electric MeterAs the name would suggest, if you have a prepay meter then you have to pay for your electricity upfront before you use it and due to this, chances are that your supplier will not require a meter reading, but on the odd occasion they may do.If they do, simply locate your meter and view the digital LCD display. In the majority of cases, the display will be set by default to show the remaining credit on the meter, but there should also be a button somewhere on the front that will allow you to change the default view and show total usage.Simply press the button to scroll between each view.If however you cannot see any buttons then you will need to consult your supplierHow to Read a Smart MeterThis is a bit of a trick as the answer to "how do you read a smart meter" is you don't, that's essentially one of their main plus points.Well, that's not strictly true as if you do have a smart meter, then you should be checking the energy usage in your home as often as possible so that you can see what appliances are using the most and when demand within the home is at its highest.From the perspective of reading the meter, to get a reading to give to your supplier so that they can bill you for your usage, this isn't required as smart meters feed usage data directly to your supplier roughly every 30 minutes, without the need for you to supply it yourself.However, if you do want to view your total usage in kWh, then this is certainly possible, but accessing the information will depend on the type of meter you have:Smart Meter with Keypad: Press 9 on your meters keypad and you should then see some letters appear, normally along the lines of IMP KWH. This will be followed by a series of 8 digits that shows your total usage figureSmart Meter with 2 Buttons: Press the button labeled Display Select or sometimes just Display. The meter should then display your usage reading. It's the series of numbers followed by kWhSmart Meter with A/B Buttons: To view your usage figure, simply press the A button until you see something similar to "TOTAL ACT IMPORT" and the series of digits below followed by kWh are your usage numbersSmart Meter with 3 Buttons: Simply press the middle button until you see a series of numbers preceded by kWh and this will be your total usage figureSmart Meter with Orange Button: Press the orange button and you should then BStandard smart meter showing total usageReading Economy 7 Smart MetersSmart meters are also available for Economy 7 and some economy 10 tariffs.If you have a smart meter with a key pad and economy 7, press the number 6 button until you can see "IMP R01". The digits preceding this should be total usage for off-peak hours.To view your on-peak usage, simply press the number 6 button again until you see "IMP R02" and the following numbers will state your on-peak usageIf you have a three button meter, press the middle button until you see R1 and R2. R1 should indicate your off-peak tariff usage and R2 should state your normal rate of on-peak usage.Note: In order to access your total usage figure in kWh, you will need to use the smart meter itself and not the in-home display unit.One final point to be aware of in terms of your electric meter is that every meter installed in the UK has it's own MPAN number (supply number or S-Number as they are also known). This number is totally unique and is used to identify your individual meter.When viewing your bills or completing a paper or online form to submit your meter readings, it's a good idea to also check the MPAN number quoted on the paperwork or you online portal against your own meter just to make sure they are the same.What Different Types of Meters are There?The type of meters used to measure electricity consumption in a given property or building vary greatly around the world, but here in the UK there are essentially six different type of electricity meter.The type of meter that is used will very much depend on the requirements of the user:Standard Electricity Meter: The standard electricity meter is the most popular type of meter and features in the majority of UK homes. It's fairly basic and measures electricity used in kWh (kilowatt hours). The total usage is displayed via a mechanical dial display which makes it very easy to take a readingStandard electrical meter with mechanical dialDial Electricity Meters: This type of meter operates in a similar way to the standard meter, but instead of a line of numbers you have a series of dials that look like mini clocks. To confuse things a little more, each dial normally turns in a different direction, either clockwise or anti-clockwiseElectric meter featuring a dial read outDigital Electricity Meters: Again, pretty similar to the standard electricity meter, only instead of have a mechanical dial display, you have an LCD display. One point to note is that if there is any mention of multi-rate anywhere on the meter then the chances are this will be an economy 7 or 10 meter, but if single rate is mentioned then chances are this is simply a standard digital meterModern standard digital electric meterEconomy 7 and Economy 10 Electric Meters: In most cases economy 7 and 10 meters are similar to the standard electric meters, in that they display usage in kWh via a mechanical dial, but instead of having one dial display you will have two. Economy 7 and economy 10 tariffs charge different rates per kWh for on-peak and off-peak electricity usage, so one dial is for on-peak usage and the other dial is for off-peak usageEconomy 7 electric meter with dual mechanical dialsPrepayment Electricity Meters: As the name suggests, this type of meter requires the user to pay for their electricity in advance as opposed to paying for what has been used. In times past, prepay meters operated on coins (some of you may remember this) but today a card or key is used to purchase credit. In terms of display, prepay meters are mostly digital and feature a button that can change the display from remaining credit to total usagePrepayment meter with top up key insertedSmart Electric Meters: The smart meter is very much at the cutting edge of electrical metering. They can accurately measure real-time electrical usage and also many other things. Smart meters also communicate directly with your supplier so you don't have to worry about supplying meter readings and they also do away with estimate billing so you are actually charged for what you use as opposed to what your supplier things you might useSmart electric meterThe type of meter that works best for you will very much depend on how and when you use the electricity in your home.If you live in a fairly busy house, where many people are in and out for most of the day then you're going to want a constant supply of electricity at a good rate.In light of this then a standard meter, dial meter, digital meter or smart meter coupled with a competitive fixed rate electrical tariff will probably be the way to go. With the emergence of so many comparison sites over the last few years, it's now very easy to compare energy suppliers and the tariffs they have on offer and get the best deal for you.If however, the majority of your electrical usage will be during off-peak night time hours, then an economy 7 or economy 10 tariff and accompanying meter may be the best solution for you.Why do you Need to Supply Electric Meter Readings?If you have a smart meter, then supplying meter readings to your energy supplier is not needed as the meter itself does this for you. However, if you don't, then you will need to provide your supplier with your electric meter readings yourself so they know how much to bill you.Ideally, you should provide readings at least every 3 months or even better, every month if you can. This will enable your electric supplier to bill you much more accurately as they will have a much better idea of your usage.In the event that you don't supply your readings regularly then your supplier will provide you with an estimate bill. This means that they will bill you on what they think you have used.On the whole, estimate bills are generally not too far off, but on the odd occasion there's a chance that you may be drastically over or under charged. Either way, both scenarios are less than ideal so it's best to supply your meter readings as regularly as possible.Where is my Electric Meter?If you have lived in your home for some time, finding your electric meter should be second nature by now.However, if you have just moved into your current home then occasionally, it can be a bit of a task locating your meter.In most instances, your electric meter should be in one of the following locations:Outside located in a meter cabinet or meter boxIn an under stairs cupboardNear the front doorIn a porchIn the garageIn a utility room/kitchenBoxed in by previous owner/tenantsIf after having a look around your meter isn't obviously visible then there are a few things you can do.If the property is a rented property then you can ask your landlord or your letting agent. They should be able to tell you straightaway. It's also worth checking your tenancy agreement.If you have just purchased the property you can try to contact the previous owner.If this isn't possible then one trick is to go outside and see if you can see any cables running into your home from nearby poles. See where the cable runs into your property and then go inside and see if you can see any wires internally.Generally, the meter itself should be located somewhere close to the incoming supply.One point to note is that there may be several cables/wires running into the house, one of which will be the telephone line, so don't confuse this with the electric supply cable.There should be some considerable size difference between these two cables, with the electric cable being a fair bit bigger.If your electric supply isn't obviously run in from a telegraph pole, then it will probably run underground. This is typically the case on many housing estates.Again, after walking around your home you should spot it fairly easily and with underground supplies the meter tends to be located externally where the supply comes out the ground or very close to it on the inside.What is a kW and a kWh?To truly understand how much energy a given appliance uses and how much this could cost you, it's a great idea to get a good understanding of exactly what a kilowatt and kilowatt hour is.By understanding what each actually means you can then easily:See how much an appliance, tool etc. could cost to runIdentify electrical goods that are expensive to run and reduce their usageSee how your energy provider works out your billsSee why it's a good idea to turn appliances off at the plug and not leave them on standbyCompare prices between energy providersFirstly we'll deal with kilowatts (or kW). As with most other metric measurement scales, kilo generally means 1000 e.g. kilogram which is a 1000 grams, kilometer which is a 1000 meters etc. and with this in mind, kilowatts are no different. 1 kilowatt essentially equals 1000 watts.Watts themselves are a measurement of power, or how much power a given appliance needs to run. For example, a 2000 watt or 2kW heater will need a supply of 2000 watts of power for it to work.When it comes to kilowatt hours (or kWh), although this measurement scale is related to kilowatts, it's not quite the same.Whereas kilowatts are a measurement of power needed for a given appliance to work, a kilowatt hour is simply a measurement unit that equates to the amount of energy that it would take to run a 1000 watt appliance for one hour.Sticking with our 2kW heater example mentioned above, as it requires 2000 watts of power to operate, it would use 1kWh of energy in only 30 minutes, or half an hour.Similarly, if you had a modern 10 watt LED light bulb, it would take 100 hours to use 1kWh of energy.How can I use Kilowatt Hours to Calculate how much an Appliance might cost to run?Now that we have established the differences between kilowatts and kilowatt hours, it's now possible to use this information to figure out how much a given appliance is likely going to cost to run.Pretty much every appliance these days will feature a label somewhere on the item that states the how much power it needs to run.A typical power rating label on the back of a microwaveOnce you have located the label, make a note of the power requirements of the appliance. In this example we're going to be using a microwave. On looking at the power rating label (as you can see in the image above) it's an 800 watt microwave.Now that we know how much power our microwave is going to use, we now need to work out how long it's going to be used for each day. For arguments sake, we're going to say 30 minutes or 0.5 hours a day.To work out exactly how many watts-hours per day our microwave is going to use, we then simply multiply 800w by the hours used per day; 800 x 0.5 = 400, so in this case, 400 watt-hours per dayThe next step is to work out our kWh figure – in this case we take our watt-hour figure of 400 watt-hours divide by 1000 watts (or a kW) and this will give us our kWh figure. To summarize, 400 watt-hours ÷ 1000 = 0.4kWhAt this point, we now have the basis of something we can work with to estimate how much our microwave is going to cost to run over a given time frame.Again, for arguments sake we're going to look at the cost of our microwave over a 31 day month. Firstly, we multiply our 0.4kWh by 31 days to give us a total of 12.4kWh for the 31 days.Next, we need to have a look at our current electricity bill or contract to see how much our provider is charging us per kWh for our electricity. As an example cost we're going to say that it's 0.19 pence per kWh.All that's left to do now is to multiply 0.19 pence x 12.4kWh for the 30 days and we arrive at a cost of £2.36 for our microwave for the month.At this point, you should now have a bit more of an in-depth understanding of the differences between kW and kWh and how each can be used to calculate the running costs of a given appliance.Depending on what meter you have will depend on how you read your electric meter. As you can see form the above, the standard electric meters are generally the easier to interpret, but on the whole, as long as you learn how to correctly read your given meter, you won't go wrong. You don't normally need to read your smart meter. Smart meters normally send readings to your supplier automatically - this is known as 'smart mode'. You can check if your smart meter should work in smart mode. You might need to read your smart meter in some situations, for example if: you've just switched supplier - you normally need to send the first meter reading yourselfyou switch supplier and they say they can't connect to your meter - this can happen if you've got an older smart meteryou want to check your meter reading - for example, to see how it's changed recently Call your supplier to give them the reading - or check if you can submit one on their website or app. If you can't get to your meter, your energy supplier might be able to give you extra help to read or move your meter. You can check if you can get extra help from your energy supplier. Check your meter - not your smart energy monitor When you get a smart meter installed, you'll also normally get a small portable device with a screen on it. This is called a 'smart energy monitor' or an 'in-home display' (IHD) - it either plugs into a socket or runs on batteries. It can be easy to confuse your smart meter with your IHD. You can check how to use the IHD for your smart meter. Example An example in-home display (IHD). You might be able to take a reading from the IHD but it's best to take one from the meter itself. The meter will be fixed to a wall or board - it's usually somewhere like a kitchen cupboard or a box on a wall outside your home. Example An example smart meter. Reading your smart electricity meter The way you take a reading from a smart electricity meter depends on the type of meter you have. If your meter has a keypad Example If the number on the display is 0012565.3, the meter reading is 12565. The way to read your meter depends on if you pay: a single rate at all times2 rates - one rate during the day and a cheaper rate at night Most people pay a single rate at all times. If you have an 'Economy 7' meter, you pay 2 rates. If you're not sure, check your bill to see if you pay 2 rates. To read the meter: Press 9Wait until you see the letters 'IMP KWH'You'll then see numbers followed by 'KWH' - this is your readingWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point To read the meter: Press 6Wait until you see 'IMP R01' followed by numbers - this is usually your night or 'off-peak' readingPress 6 again until you see 'IMP R02' followed by numbers - this is usually your day or 'peak' readingWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point If you're not sure which is the day rate or the night rate, check the numbers in the morning and check again later that day. The number that's changed will be your day or 'peak' rate. If your meter has A and B buttons under the screen Example If the number on the display is 0011256.3, the meter reading is 11256. To read the meter: Press the A buttonPress the A button again until you see 'TOTAL ACT IMPORT' and numbers followed by 'KWH'Write down the number from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point If your meter has a green A button to the right of the screen and a white B button below it Example If the number on the display is 0011256.3, the meter reading is 11256. The way to read your meter depends on if you pay: a single rate at all times2 rates - one rate during the day and a cheaper rate at night Most people pay a single rate at all times. If you have an 'Economy 7' meter, you pay 2 rates. If you're not sure, check your bill to see if you pay 2 rates. To read the meter: Press the white B button - the screen will light upWait until the screen says 'meter boost' - press 'A' to select 'no' and you should see numbers followed by 'KWH'Write down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point To read the meter: Press the green A buttonPress the green A button again until you see 'Rate 01 Act Imp' - this is usually your night or 'off-peak' readingPress the green button again until you see 'Rate 02 Act Imp' - this is usually your day or 'peak' readingWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point If you're not sure which is the day rate or the night rate, check the numbers in the morning and check again later that day. The number that's changed will be your day or 'peak' rate. If your meter has 3 buttons to the right of the screen Example If the number on the display is 0011256.3, the meter reading is 11256. The way to read your meter depends on if you pay: a single rate at all times2 rates - one rate during the day and a cheaper rate at night Most people pay a single rate at all times. If you have an 'Economy 7' meter, you pay 2 rates. If you're not sure, check your bill to see if you pay 2 rates. To read the meter: Press the middle buttonWrite down the number below 'IMP' from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point To read the meter: Press the middle button - it should say 'R1'Write down the number below 'IMP' from left to right - this is usually your night or 'off-peak' readingPress the middle button again - it should say 'R2'Write down the number below 'IMP' from left to right - this is usually your day or 'peak' readingPress the middle button again - it should say 'T'Write down the number below 'IMP' from left to right - this is your 'total' readingIgnore any zeroes at the beginning of numbers and any numbers after the decimal point. You'll only need the 'total' reading if your supplier asks for it If you're not sure which is the day rate or the night rate, check the numbers in the morning and check again later that day. The number that's changed will be your day or 'peak' rate. If you have 1 orange button and 2 blue buttons Example If the number on the display is 12565, the meter reading is 12565. These meters have a row of numbers followed by KWH. To read the meter: Press the orange button to the left of the screenWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point if there is one If you have a meter with two white buttons to the right of the screen Example If the number on the display is 0011256.3, the meter reading is 11256. Your meter should have 'Kaifa MA 120' printed on it. It will automatically change between four different screens, so you don't need to press anything. To read the meter: Wait for the screen that shows numbers followed by KWHWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point if there is one If your meter has 2 buttons to the right of the screen and one says 'reconnect' Example If the number on the display is 0023541.2, the meter reading is 23541. Your meter will have one button which says 'reconnect' and another button which says 'display' or 'display select'. To read the meter: Press the 'display' or 'display select' buttonPress the 'display' or 'display select' button again until you see numbers followed by KWHWrite down the number from left to rightIgnore any zeroes at the beginning and any numbers after a decimal point if you have one If your meter has a green A button and grey B button to the right of the screen Example If the number on the display is 00256, the meter reading is 256. To read the meter: Look at the screen - you don't need to press any buttonsWrite down the number next to 'KWH' from left to rightIgnore any zeroes at the beginning and any numbers after the decimal point if there is one If your meter has 2 yellow square buttons to the left of the screen Example If the number on the display is 12565.3, the meter reading is 12565. The way to read your meter depends on if you pay: a single rate at all times2 rates - one rate during the day and a cheaper rate at night Most people pay a single rate at all times. If you have an 'Economy 7' meter, you pay 2 rates. If you're not sure, check your bill to see if you pay 2 rates. To read your meter: Press the right-hand yellow buttonPress the right-hand yellow button again until you see TOU, 1 and numbers followed by KWHWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after a decimal point if there is one To read your meter: Press the right-hand yellow buttonPress the right-hand yellow button again until you see TOU, 1 and numbers followed by KWHWrite down the numbers from left to rightPress the right-hand yellow button again and you'll see TOU, 2 and numbers followed by KWHWrite down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after a decimal point if there is one If you're not sure which is the day rate or the night rate, check the numbers in the morning and check again later that day. The number that's changed will be your day or 'peak' rate. If your meter has 1 blue button and 1 orange button to the right of the screen Example If the number on the display is 04183, the meter reading is 4183. The way to read your meter depends on if you pay: a single rate at all times2 rates - one rate during the day and a cheaper rate at night Most people pay a single rate at all times. If you have an 'Economy 7' meter, you pay 2 rates. If you're not sure, check your bill to see if you pay 2 rates. To read your meter: Press the blue button labelled 'A' to turn on the display lightPress the blue button again until you see 'Total active import kWh'Write down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after a decimal point if there is one To read your meter: Press the blue button labelled 'A' to turn on the display lightPress the blue button again until you see 'TOU Rate 1'Write down the numbers from left to rightPress the blue button once more to see 'TOU Rate 2'Write down the numbers from left to rightIgnore any zeroes at the beginning and any numbers after a decimal point if there is one If you're not sure which is the day rate or the night rate, check the numbers in the morning and check again later that day. The number that's changed will be your day or 'peak' rate. If you can't find your meter on this page Check your meter says 'KWH' after the reading. If it says 'M3' it's a gas meter. If you're not sure if it's a smart meter, it might be a standard meter instead. Check how to read a standard electricity meter. If you also need to read a smart gas meter Find out how to read your smart gas meter. Page last reviewed on 26 March 2021 Electric meters or energy meters as they are also known are installed in pretty much every home or commercial premises in the country that has a connection to the electrical grid.The meter is used to calculate how much electricity has been used or consumed by the occupants of the premises to power appliances such as TV's, fridges, freezers and other household goods so that their energy supplier can charge for what's been used.The meter itself measures electrical usage in "units". With most meters, one unit of electricity consumed is equal to one kilowatt hour (or kWh for short) or if 1000 watts of power is drawn consistently over the period of one hour, this equals 1 kWh or 1 unit.How to Read an Electric MeterThere are several different types of electrical meter installed in homes in the UK and each needs to be read a slightly different way:How to Read a Standard Electric MeterReading a standard electric meter to give your energy supplier a meter reading is a straightforward job. All you have to do is provide your supplier with the numbers in black or on a black surround, reading them from left to right.You may also notice that there are numbers in red or on a red background. 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If they run clockwise, then read the dial clockwise, but if they run anti-clockwise, read the dial in an anti-clockwise direction.Each dial will run all the way around from 0 to 9, at which point it then starts again.There are also a few rules to be aware of when reading the dials:Always start with the dial furthest to the left and then read across to the rightIf the dial hand falls between two numbers go with the lowest number e.g. if it falls half way between 8 and 9, go with 8If the dial hand falls between 0 and 9 on any dial then always go with the 9If you have a reading of 9 on any of the dials then you will need to reduce the reading of the dial to it's left by 1 e.g. if the fourth dial reads 9 and the third dial to its left reads 3, this numbers needs reducing to 2You don't need to record the last dial. These are normally coloured red or labeled 1/10Older style electric meter dial read outHow to Read an Electronic or Digital Electric MeterAgain, as with the standard electric meter, the digital meter is easy to read. On the digital LCD display, record all of the numbers to the left of the decimal point including any zero values.Any numbers to the right of the decimal point can be safely ignored.Digital electric meter with digital usage read outHow to Read Economy 7 and Economy 10 Electric MetersAs we have discussed above, Economy 7 and Economy 10 meters feature two displays if their the older type mechanical meters or if you have a digital meter, there will be a meter view select button on the meter itself which will simply alternate between reading views.If there is any mention of "multirate" on the meter housing then you can be sure that the digital meter you are dealing with is indeed an economy 7 or 10 meter. However, if it mentions single rate then it's simply a standard digital meter on a standard tariff.If you've established your digital meter is indeed a multi-rate meter then you will need to supply two meter readings to your supplier – your on-peak and off-peak readings.Most digital multi-rate meters will simply alternate their display to show either the on-peak or off-peak reading. If you watch it for long enough you should see it change.The given reading you are viewing will be signified by the small number to the left of the actual reading – either 1 or 2Simply note down each reading onto a piece of paper and then transfer them to your suppliers chosen method of capturing the readings. In most cases, this will be an online portal of some kind.In the case that you have an older mechanical meter, both readings should be displayed and easy to see. Simply note each one down and transfer them to your supplier for billing.Economy 7 electric meter showing dual mechanical read outsHow to Read a Prepayment Electric MeterAs the name would suggest, if you have a prepay meter then you have to pay for your electricity upfront before you use it and due to this, chances are that your supplier will not require a meter reading, but on the odd occasion they may do.If they do, simply locate your meter and view the digital LCD display. In the majority of cases, the display will be set by default to show the remaining credit on the meter, but there should also be a button somewhere on the front that will allow you to change the default view and show total usage.Simply press the button to scroll between each view.If however you cannot see any buttons then you will need to consult your supplierHow to Read a Smart MeterThis is a bit of a trick as the answer to "how do you read a smart meter" is you don't, that's essentially one of their main plus points.Well, that's not strictly true as if you do have a smart meter, then you should be checking the energy usage in your home as often as possible so that you can see what appliances are using the most and when demand within the home is at its highest.From the perspective of reading the meter, to get a reading to give to your supplier so that they can bill you for your usage, this isn't required as smart meters feed usage data directly to your supplier roughly every 30 minutes, without the need for you to supply it yourself.However, if you do want to view your total usage in kWh, then this is certainly possible, but accessing the information will depend on the type of meter you have:Smart Meter with Keypad: Press 9 on your meters keypad and you should then see some letters appear, normally along the lines of IMP KWH. This will be followed by a series of 8 digits that shows your total usage figureSmart Meter with 2 Buttons: Press the button labeled Display Select or sometimes just Display. The meter should then display your usage reading. It's the series of numbers followed by kWhSmart Meter with A/B Buttons: To view your usage figure, simply press the A button until you see something similar to "TOTAL ACT IMPORT" and the series of digits below followed by kWh are your usage numbersSmart Meter with 3 Buttons: Simply press the middle button until you see a series of numbers preceded by kWh and this will be your total usage figureSmart Meter with Orange Button: Press the orange button and you should then BStandard smart meter showing total usageReading Economy 7 Smart MetersSmart meters are also available for Economy 7 and some economy 10 tariffs.If you have a smart meter with a key pad and economy 7, press the number 6 button until you can see "IMP R01". The digits preceding this should be total usage for off-peak hours.To view your on-peak usage, simply press the number 6 button again until you see "IMP R02" and the following numbers will state your on-peak usageIf you have a three button meter, press the middle button until you see R1 and R2. R1 should indicate your off-peak tariff usage and R2 should state your normal rate of on-peak usage.Note: In order to access your total usage figure in kWh, you will need to use the smart meter itself and not the in-home display unit.One final point to be aware of in terms of your electric meter is that every meter installed in the UK has it's own MPAN number (supply number or S-Number as they are also known). This number is totally unique and is used to identify your individual meter.When viewing your bills or completing a paper or online form to submit your meter readings, it's a good idea to also check the MPAN number quoted on the paperwork or you online portal against your own meter just to make sure they are the same.What Different Types of Meters are There?The type of meters used to measure electricity consumption in a given property or building vary greatly around the world, but here in the UK there are essentially six different type of electricity meter.The type of meter that is used will very much depend on the requirements of the user:Standard Electricity Meter: The standard electricity meter is the most popular type of meter and features in the majority of UK homes. It's fairly basic and measures electricity used in kWh (kilowatt hours). The total usage is displayed via a mechanical dial display which makes it very easy to take a readingStandard electrical meter with mechanical dialDial Electricity Meters: This type of meter operates in a similar way to the standard meter, but instead of a line of numbers you have a series of dials that look like mini clocks. To confuse things a little more, each dial normally turns in a different direction, either clockwise or anti-clockwiseElectric meter featuring a dial read outDigital Electricity Meters: Again, pretty similar to the standard electricity meter, only instead of have a mechanical dial display, you have an LCD display. One point to note is that if there is any mention of multi-rate anywhere on the meter then the chances are this will be an economy 7 or 10 meter, but if single rate is mentioned then chances are this is simply a standard digital meterModern standard digital electric meterEconomy 7 and Economy 10 Electric Meters: In most cases economy 7 and 10 meters are similar to the standard electric meters, in that they display usage in kWh via a mechanical dial, but instead of having one dial display you will have two. Economy 7 and economy 10 tariffs charge different rates per kWh for on-peak and off-peak electricity usage, so one dial is for on-peak usage and the other dial is for off-peak usageEconomy 7 electric meter with dual mechanical dialsPrepayment Electricity Meters: As the name suggests, this type of meter requires the user to pay for their electricity in advance as opposed to paying for what has been used. In times past, prepay meters operated on coins (some of you may remember this) but today a card or key is used to purchase credit. In terms of display, prepay meters are mostly digital and feature a button that can change the display from remaining credit to total usagePrepayment meter with top up key insertedSmart Electric Meters: The smart meter is very much at the cutting edge of electrical metering. They can accurately measure real-time electrical usage and also many other things. Smart meters also communicate directly with your supplier so you don't have to worry about supplying meter readings and they also do away with estimate billing so you are actually charged for what you use as opposed to what your supplier things you might useSmart electric meterThe type of meter that works best for you will very much depend on how and when you use the electricity in your home.If you live in a fairly busy house, where many people are in and out for most of the day then you're going to want a constant supply of electricity at a good rate.In light of this then a standard meter, dial meter, digital meter or smart meter coupled with a competitive fixed rate electrical tariff will probably be the way to go. With the emergence of so many comparison sites over the last few years, it's now very easy to compare energy suppliers and the tariffs they have on offer and get the best deal for you.If however, the majority of your electrical usage will be during off-peak night time hours, then an economy 7 or economy 10 tariff and accompanying meter may be the best solution for you.Why do you Need to Supply Electric Meter Readings?If you have a smart meter, then supplying meter readings to your energy supplier is not needed as the meter itself does this for you. However, if you don't, then you will need to provide your supplier with your electric meter readings yourself so they know how much to bill you.Ideally, you should provide readings at least every 3 months or even better, every month if you can. This will enable your electric supplier to bill you much more accurately as they will have a much better idea of your usage.In the event that you don't supply your readings regularly then your supplier will provide you with an estimate bill. This means that they will bill you on what they think you have used.On the whole, estimate bills are generally not too far off, but on the odd occasion there's a chance that you may be drastically over or under charged. Either way, both scenarios are less than ideal so it's best to supply your meter readings as regularly as possible.Where is my Electric Meter?If you have lived in your home for some time, finding your electric meter should be second nature by now.However, if you have just moved into your current home then occasionally, it can be a bit of a task locating your meter.In most instances, your electric meter should be in one of the following locations:Outside located in a meter cabinet or meter boxIn an under stairs cupboardNear the front doorIn a porchIn the garageIn a utility room/kitchenBoxed in by previous owner/tenantsIf after having a look around your meter isn't obviously visible then there are a few things you can do.If the property is a rented property then you can ask your landlord or your letting agent. They should be able to tell you straightaway. It's also worth checking your tenancy agreement.If you have just purchased the property you can try to contact the previous owner.If this isn't possible then one trick is to go outside and see if you can see any cables running into your home from nearby poles. See where the cable runs into your property and then go inside and see if you can see any wires internally.Generally, the meter itself should be located somewhere close to the incoming supply.One point to note is that there may be several cables/wires running into the house, one of which will be the telephone line, so don't confuse this with the electric supply cable.There should be some considerable size difference between these two cables, with the electric cable being a fair bit bigger.If your electric supply isn't obviously run in from a telegraph pole, then it will probably run underground. This is typically the case on many housing estates.Again, after walking around your home you should spot it fairly easily and with underground supplies the meter tends to be located externally where the supply comes out the ground or very close to it on the inside.What is a kW and a kWh?To truly understand how much energy a given appliance uses and how much this could cost you, it's a great idea to get a good understanding of exactly what a kilowatt and kilowatt hour is.By understanding what each actually means you can then easily:See how much an appliance, tool etc. could cost to runIdentify electrical goods that are expensive to run and reduce their usageSee how your energy provider works out your billsSee why it's a good idea to turn appliances off at the plug and not leave them on standbyCompare prices between energy providersFirstly we'll deal with kilowatts (or kW). As with most other metric measurement scales, kilo generally means 1000 e.g. kilogram which is a 1000 grams, kilometer which is a 1000 meters etc. and with this in mind, kilowatts are no different. 1 kilowatt essentially equals 1000 watts.Watts themselves are a measurement of power, or how much power a given appliance needs to run. For example, a 2000 watt or 2kW heater will need a supply of 2000 watts of power for it to work.When it comes to kilowatt hours (or kWh), although this measurement scale is related to kilowatts, it's not quite the same.Whereas kilowatts are a measurement of power needed for a given appliance to work, a kilowatt hour is simply a measurement unit that equates to the amount of energy that it would take to run a 1000 watt appliance for one hour.Sticking with our 2kW heater example mentioned above, as it requires 2000 watts of power to operate, it would use 1kWh of energy in only 30 minutes, or half an hour.Similarly, if you had a modern 10 watt LED light bulb, it would take 100 hours to use 1kWh of energy.How can I use Kilowatt Hours to Calculate how much an Appliance might cost to run?Now that we have established the differences between kilowatts and kilowatt hours, it's now possible to use this information to figure out how much a given appliance is likely going to cost to run.Pretty much every appliance these days will feature a label somewhere on the item that states the how much power it needs to run.A typical power rating label on the back of a microwaveOnce you have located the label, make a note of the power requirements of the appliance. In this example we're going to be using a microwave. On looking at the power rating label (as you can see in the image above) it's an 800 watt microwave.Now that we know how much power our microwave is going to use, we now need to work out how long it's going to be used for each day. For arguments sake, we're going to say 30 minutes or 0.5 hours a day.To work out exactly how many watts-hours per day our microwave is going to use, we then simply multiply 800w by the hours used per day; 800 x 0.5 = 400, so in this case, 400 watt-hours per dayThe next step is to work out our kWh figure – in this case we take our watt-hour figure of 400 watt-hours divide by 1000 watts (or a kW) and this will give us our kWh figure. To summarize, 400 watt-hours ÷ 1000 = 0.4kWhAt this point, we now have the basis of something we can work with to estimate how much our microwave is going to cost to run over a given time frame.Again, for arguments sake we're going to look at the cost of our microwave over a 31 day month. Firstly, we multiply our 0.4kWh by 31 days to give us a total of 12.4kWh for the 31 days.Next, we need to have a look at our current electricity bill or contract to see how much our provider is charging us per kWh for our electricity. As an example cost we're going to say that it's 0.19 pence per kWh.All that's left to do now is to multiply 0.19 pence x 12.4kWh for the 30 days and we arrive at a cost of £2.36 for our microwave for the month.At this point, you should now have a bit more of an in-depth understanding of the differences between kW and kWh and how each can be used to calculate the running costs of a given appliance.Depending on what meter you have will depend on how you read your electric meter. As you can see form the above, the standard electric meters are generally the easier to interpret, but on the whole, as long as you learn how to correctly read your given meter, you won't go wrong. If you've got a traditional analogue energy meter (not a smart one), you'll need to send in regular meter readings so we can work out how much energy you're using. Smart meters remove the need for meter readings (they send readings to us automatically - register your interest in a smart meter and we'll be in touch when engineers are available in your area) but there are a handful of situations where you might still need to take a manual meter reading from your smart meter.If you're on one of our export tariffs, you'll have to provide 'export readings' from your SMETS1 or SMETS2 meter (not your generation meter, or your In-Home Display) so we can calculate your export payments. Below, in our guides to taking readings from SMETS1 and SMETS2 meters, we'll also explain how to take export readings from a range of different meters. If you're meter isn't included on the list, don't hesitate to get in touch.Electricity and gas meters come in several different shapes and sizes, so before we can tell you how to read your meter, it's important to work out which type of meter you have. All households had meters like this up until a few years ago, when smart meters began being installed.If your meter haven't been changed since before 2017, and either has dials or an analogue meter display with 4-6 black and white (and some red) numbers, you have traditional meters. Here's how to take readings from traditional analogue meters Smart metersThere are two different generations of smart meters – SMETS1, the earlier version, and SMETS2, the latest version.How to tell what kind of meter you haveIf you're already with us, you can head to your online account dashboard. In the section that contains information about your meters, click 'how to read my meter', which will take you to the correct section of this blog. To be 100% sure which kind of meter you have, the best way to find out exactly which type (and brand) of smart meter you have is to contact the energy supplier that installed it. If that was us, don't hesitate to get in touch!We installed Secure™ branded smart meters up until 2018, they have 'Secure' logos on the front. (Secure™ also supplied meters to Utilita, Shell, OVO, E.ON and Bristol Energy - so if you have a first generation SMETS1 smart meter from them and it's a Secure™ meter, this section is for you too!)Find out how to read your Octopus-installed Secure™ brand first generation (SMETS1) smart meterFind out how to read your non

'A' or 'B' to wake up the screen. This should automatically come up with your gas reading. To read your ELSTER/Honeywell AS302P electricity meter, first locate the two grey buttons on the right side of the display. Press the top button “A” to wake up the display backlight and display the ‘General’ menuPush the bottom button “B” to scroll through menu options: ‘General’, then ‘Boost’, and then ‘Registers’ menus will be displayedSelect the ‘Registers’ menu by pressing button APush button B to scroll through menu options: ‘Cumulative’, then ‘Rates in Use’, and then ‘Rates 1-48’ menus will be displayedSelect the ‘Rates 1-48’ menu by pressing button AUse the push button B to scroll through menu options: ‘Imp. R1’ and select by pressing button A. This is your single rate meter reading To take two rate meter readings from your ELSTER/Honeywell AS302P SMETS2 electricity meter:Press the top button “A” to wake up the display backlight and display the ‘General’ menuPush the bottom button “B” to scroll through menu options: ‘General’, then ‘Boost’, and then ‘Registers’ menus will be displayedSelect the ‘Registers’ menu by pressing button APush button B to scroll through menu options: ‘Cumulative’, then ‘Rates in Use’, and then ‘Rates 1-48’ menus will be displayedSelect the ‘Rates 1-48’ menu by pressing button AUse the push button B to scroll through menu options: ‘Imp. R1’ then ‘Imp. R2’ and select by pressing button A. This is your two rate meter reading To take an export reading from your ELSTER/Honeywell AS302P SMETS electricity meter:Press the top button “A” to wake up the display backlight and display the ‘General’ menuPush the bottom button “B” to scroll through menu options: ‘General’, then ‘Boost’, and then ‘Registers’ menus will be displayedSelect the ‘Registers’ menu by pressing button APush button B to scroll through menu options: ‘Cumulative’Select the ‘Cumulative’’ menu by pressing button A. It should show your ‘Import’Push button B to scroll through menu options until you see ‘Export’ in kWh. This ‘Cum. Exp.’ figure is your solar export reading Your EDMI SMETS2 electricity meter should auto-display your meter reading on the main screen (It will revert back to this screen if you do not press any buttons 1 minute).To take two rate meter readings from your EDMI SMETS2 electricity meter:Hold OK until it enters the ‘Main Menu’, you will see ‘Billing’ appearHold OK to enter the ‘Billing’ sub-menuUsing the arrows, scroll to ‘Advancd’ (2 pushes of the > button)Hold OK to enter the ‘Advanced’ sub-menu, you will see ‘TOUmtrx’ appearHold OK to enter the ‘TOUmatrx’ sub-menu, you will see ‘RATE1’ appearUse the arrows to cycle the rates you need to submit (Rate 1, Rate 2, ...) Your EDMI gas meter should auto-display your meter readings. If the screen has gone to sleep, press the button on the right to wake up the meter screen. You should see the words 'Consumption in $M^3$, and a number which is your meter reading. The display will automatically cycle through other screens, but this first one is your reading. This meter does not require 'waking up' and uses a default auto scroll mode, cycling through its four screens. It will cycle through to the screen with your meter reading on automatically. To take two rate meter readings from your Kaifa SMETS2 electricity meter:Press the top button (K1) to enter the menu system.With the arrow next to General Display, press and hold the top button (K1).Then press the bottom button (K2) to scroll down to Tariff Matrix. With the arrow next to Tariff Matrix, press and hold the top button (K1).With the arrow next to TOU Register, press and hold the top button (K1). T01 shows the total for R1, T02 shows the total for R2. T03 and 4 shows the unused Rate band.To take an export reading from your Kaifa SMETS2 electricity meter:Your meter will automatically switch between 4 different screens - you don’t need to push any buttons.Your export reading is on the screen that shows ‘-A value’ in kWh. When reading your Flonidan smart gas meter, your meter reading should be displayed automatically on the default screen. It should be a number preceded by a large 'V' and followed by 'm3' If you have cycled off that screen, you can use the 'left' and 'centre' push buttons beneath the screen to cycle back to it. Press the right-hand side button twice in quick succession to access the manual scroll sequence. Windows '02' displays the meter reading  The reading will be on the screen, if the display has gone to sleep mode, press any button to get the reading which will be shown on the display. Hey I'm Constantine, welcome to Octopus Energy! × Your browser is out of date In order to provide you with the latest digital energy web services you need to use the latest and greatest web browsers. Update your browser for a better web experience, here and all over the internet. To read an electric meter, note the numbers on the dials from the right side to the left. If a pointer is exactly on a number, check the next dial to the right. Electric meters are tools that tell you how much electricity your home or business uses. Knowing how to read them helps you keep track of energy use, control your bills, and save energy. This guide will teach you how to read an electric meter, answer common questions, and give useful tips. Electricity meters are important because they help people keep track of how much energy they use. No matter what type of meter you have, knowing how to read it is key to managing your energy use and making sure your bills are correct. Electric meters come in two main types: digital and analog meters. Each type has its unique features, requiring specific methods for accurate reading. Analog Electric Meter Analog meters are the traditional type of electric meters that have been used for decades. They consist of a series of dials with numbers and rotating pointers. To read an analog electric meter, begin from the right side and go to the left, writing down the numbers indicated by the pointers. Keep in mind that some dials turn to the right, while others turn to the left. When a pointer is directly on a number, look at the dial to the right. If the pointer has passed zero, use the next higher number. If it hasn’t passed zero, use the lower number. Repeat this process for each dial, writing down the numbers as you go. Digital Electric Meters Digital meters are the updated electric meters that show readings digitally. They are simpler to read and give more precise data. Digital meters usually show numbers in kilowatt-hours (kWh), which is the unit used to measure energy use. The meter often shows different data like current use, total use, and more. To read a digital meter, just write down the numbers you see on the screen. Some meters can scroll to show more detailed energy use data. Knowing how to read your electric meter is key to tracking your energy use and controlling your electricity bills. Whether your meter is analog or digital, reading the numbers correctly helps you track your energy use. To read an analog dial meter, you need to know the steps. Start from the dial on the far left and go to the right. Each dial shows a different unit like kilowatts. By doing this, you can read your meter and know how much energy you’re using. Start At The Left-most Dial To begin reading an analog dial meter, locate the leftmost dial and take note of the number it is pointing to. This dial represents the largest unit of measurement and is typically in kilowatts. It’s important to pay attention to the direction the dial is moving, whether it’s clockwise or counterclockwise. This will help you record the reading. Record The Lower Number If The Pointer Is Between Numbers As you move toward the right on the analog dial meter, you’ll come across smaller dials representing smaller units of measurement. If the pointer on a dial is between two numbers, always record the lower number. This ensures that you are accurately tracking your energy usage and not overestimating your consumption. Reading your electric meter is key to knowing your electricity use. One kind of meter is the digital meter, which gives a precise reading of your electricity use. To track your energy use right, you need to know how to read a digital meter. Write Down The Digit Indicated By The Arrow In a digital meter, an arrow usually points to the number indicating your energy usage. This number represents your kilowatt-hour (kWh) consumption. To read your digital meter: Locate the arrow on the meter display Identify the number where the arrow is pointing Write down this digit as it represents your current electricity usage By noting the digit pointed by the arrow, you can keep track of your energy consumption accurately. Example: If the arrow is pointing to number 7, write down 7 as your current energy usage. Ensuring Accuracy To ensure you are recording the correct reading, double-check your entry for accuracy. Since digital meters provide precise readings, it’s crucial to write down the number accurately. If you’re not sure about the number shown, wait a bit. Digital meters often show different numbers before showing the final reading. This helps you check the right number. Remember, being accurate is important to track your energy use and make smart choices about your electricity use. Tracking Your Usage By regularly reading your digital meter, you can keep track of your energy usage trends. It allows you to monitor how much electricity you are consuming and identify ways to reduce your usage and lower your monthly electric bill. If you have solar panels installed, reading your digital meter becomes even more crucial. It helps you determine how much electricity you are generating and compare it to your consumption. In Conclusion Reading a digital meter is an easy but key task for knowing your electricity use. By writing down the number shown by the arrow and being accurate, you can track your energy use well. Checking your electricity use often with a digital meter helps you make smart choices and work towards using energy. To read a digital electric meter, locate the display and record the numbers from left to right. Make note of the displayed kilowatt-hour reading. Ensure accurate readings for tracking energy usage. To read an electric meter, note the numbers from right to left, starting with the dial on the right. If the pointer is between numbers, record the lower number. Use the next higher number if the dial to the right has passed zero. The reading in kWh of the electric meter can be found by reading and writing down the numbers on the dials from right to left. If the pointer is on a number, use the dial to the right. If the pointer has gone past zero, write down the next bigger number. If it hasn’t gone past zero, write down the smaller number. To check your meter number, you can find it on your electricity bill under “your electricity usage” or on the meter itself. Learning how to read your electric meter is an essential skill that can help you better understand your energy consumption. By following the steps outlined in this blog post, you can confidently read your meter and keep track of your energy usage. This knowledge can empower you to make informed decisions about your energy consumption and reduce your electricity bills. So, take the time to familiarize yourself with your electric meter and start taking control of your energy usage today.