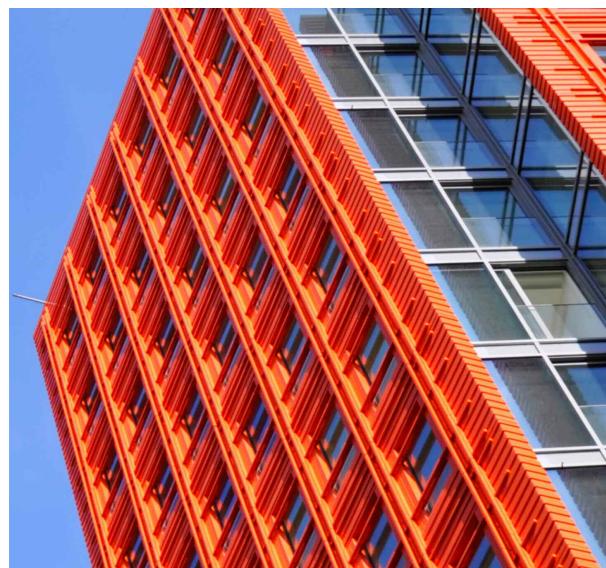


**The Renewable Solutions Provider**  
**Making a World of Difference**

# Mitsubishi Electric Guide to Minimum Energy Efficiency Standards for Non-dwellings



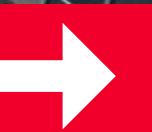
**Information Guide**

**60**



Air Conditioning | Heating  
Ventilation | Controls





# Mitsubishi Electric Guide to Minimum Energy Efficiency Standards for Non-dwellings



This is an independent guide produced by Mitsubishi Electric to enhance the knowledge of its customers and provide a view of the key issues facing our industry today.

This guide accompanies a series of seminars, all of which are CPD certified.

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# What are Minimum Energy Efficiency Standards for buildings?

Minimum Energy Efficiency Standards (MEES) apply to the rented private sectors for dwellings and non-dwellings. This Guide will concentrate on the impact of the new rules on non-domestic properties in England and Wales.

In simple terms, the MEES will make it illegal to let any property which has an Energy Performance Certificate (EPC) rating of less than a band 'E'. The non-dwellings which will fall under the scope of the MEES rules are defined as any property let on a tenancy which is not a dwelling. There are exceptions to the requirements which are discussed later in this document.

There will be a phased introduction of the MEES: they will apply to new leases from 1st April 2018; and to all leases from April 2023. The overall aim of the UK Government is to see as many buildings as possible raised to EPC band E by 2020; and then an improvement to band D by 2025.

The ultimate goal is to move the commercial property sector to a minimum of band C by 2030. Building owners and managers need to bear this in mind when considering their response to MEES - the targets for energy efficiency will become progressively higher over the next decade.

**In the much nearer future, owners of commercial property will have to ensure that their buildings achieve a minimum EPC band E by 2018 before they can be leased to new or renewing tenants.**



# Why is the Government taking this approach?

The Government is focused on reducing carbon emissions resulting from energy use in buildings, because these are one of the largest contributors to the country's carbon emissions overall.

Although there are strong arguments for improving the energy efficiency of buildings, including lower operating costs and longer lifetime of building services equipment (to name only two), there is still a long way to go to improve the performance of building stock.

A number of barriers to greater efficiency were identified by Government research. One of the most significant is that the cost of installing efficiency measures usually falls to landlords, but benefits tenants in the form of lower energy bills.

Although, in theory, landlords could charge higher rents for more energy efficient buildings, this is still not generally done. Also, tenancies tend to be relatively short (see figures on page 8) so the amount of financial benefit to tenants would be questionable.

As a result of analysis and consultation with the market, the Government has implemented MEES as a way of moving the commercial property market away from low-energy rated buildings - and at the same time raising awareness of the benefits of being more energy efficient.

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**The MEES approach is designed to ensure there is no capital cost for landlords who can use the Green Deal finance model to improve their properties.**

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## A reminder about Energy Performance Certificates (EPCs)

It is useful to take a look at the requirements for EPCs, since the MEES requirements are based on these Certificates.

EPCs were introduced into the UK in 2008 via the Energy Performance of Buildings Regulation (EPBD). An EPC is valid for ten years - so that the Certificate can be used and re-used until it expires. There is no requirement for a new EPC for each time the building is let or sold, but for each new tenant (or purchaser), the EPC must be available along with the recommendations report that accompanies it.

The Chartered Institution of Building Services Engineers (CIBSE) outlines the information that is used by an accredited EPC assessor to draw up the Certificate:

- Size of a building and different activity areas in it
- Insulation levels in the building
- Systems providing heat to the building
- How fresh air is moved around the building
- What keeps the building cool
- How hot water is provided to bathrooms & kitchens
- Building Energy Management Systems or controls
- Electricity feed for the building
- Lighting systems for the building
- Presence of on-site energy generation

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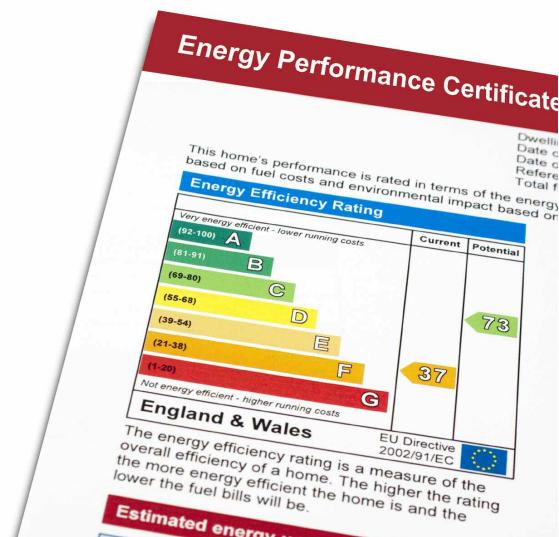
**The more complete the information provided during assessment, the more accurate the EPC is.**

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Enforcing requirements for EPCs in a particular geographic area is the duty of the local weights and measures authority.

**Their key tasks are:**

- Making EPCs available
- Appropriate commissioning and obtaining of EPCs
- Display of EPCs where required
- Compliance with requirements regarding air conditioning inspections
- Ensuring required documents are produced in seven days
- Inclusion in adverts of energy performance indicators



## MEES - the rules in detail

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Landlords must improve the energy efficiency of their properties to meet the Minimum Energy Efficiency Standards, unless it would not be cost-effective to do so.

The MEES uses the same 'Golden Rule' as the Green Deal to indicate what is considered cost effective. This means that property owners will not be forced to carry out works unless they are 'permissible, appropriate and cost-effective'. The Golden Rule is that any energy savings resulting from equipment paid for via the Green Deal must be equal to, or better than, the amount of money borrowed. If funding is not available, there should be a seven-year payback period.

**There are other important exemptions to MEES:**

- Where a lease is for six months or less, provided that the same tenant has not occupied the property for over twelve months
- Where a lease is for more than 99 years
- Where a building is excluded from having an EPC
- Landlords will also be exempt from carrying out improvement works if the tenant refuses to consent to the works
- This also applies if third party consents have been refused in the previous five years
- Improvements do not have to be carried out if they reduce the property value by 5% or more, which should be reviewed every five years

If any of these exemptions apply, the property owner or landlord must inform DECC, and the property will be held on a register of exemptions.

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**The MEES regulations will be enforced by local authorities. They will issue compliance notices requesting information and will also be responsible for penalty notices for non compliance. The fines for non-compliance are set at a very high level, with a maximum fine of £150,000.**

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## Impact of MEES on the commercial property market

There can be no doubt that the potential impact of MEES on the commercial property market is significant.

The non-domestic private rented sector (PRS, as it is termed by the Government) is a major part of the UK economy. According to the Property Industry Alliance's Property Data Report 2015, the value of the UK's stock of commercial property was worth £787 billion in 2014. This is equivalent in value to 35% of the UK's stock market.

There are 1.2 million non-domestic PRS hereditaments (the legal term for a unit of property space to which business rates are applied). This makes up around 66% of the non-domestic stock in England and Wales. EPC records for England and Wales show that approximately 10% of non-domestic buildings have an EPC of band G; and 8% are in band F. This means that 200,000 hereditaments of the non-domestic PRS stock fall in the two lowest EPC bands.

### Proportion of EPC ratings in non-domestic building stock

(September 2013)

| EPC Rating | Percentage of stock |
|------------|---------------------|
| A          | 1%                  |
| B          | 7%                  |
| C          | 27%                 |
| D          | 30%                 |
| E          | 17%                 |
| F          | 8%                  |
| G          | 10%                 |

This does not take into account those buildings in the E band which may hold older EPCs and which may, on renewal, fall into a lower band.

Another factor to bear in mind is the type of tenancies which dominate the non-domestic private rented sector. Given that MEES is activated when a tenancy is signed, then the turnover of tenants will also impact on the number of buildings which must be improved. The table below was compiled by the **British Property Federation and Investment Property Databank** and shows tenancy types by size of company.

|                     | 1-5 Years | 6-10 Years | 11-15 Years | 16-20 Years | >21 Years | Average length |
|---------------------|-----------|------------|-------------|-------------|-----------|----------------|
| SMEs (%)            | 78.3      | 19.2       | 2.1         | 0.2         | 0.2       | 4.1 years      |
| Large Companies (%) | 68.6      | 23         | 6.8         | 0.9         | 0.6       | 5.2 years      |

(British Property Federation/Investment Property Databank)

The average tenancy is just over four years for small to medium-sized companies, with larger businesses leasing for just over five years on average.

The MEES rules are aimed at raising the energy efficiency standards of all buildings - from homes to offices as well as factories and warehouses. It is therefore interesting to consider how the UK commercial property market breaks down in terms of building type.

The table below is based on figures from the **Property Industry Association**.

|                                  | £ Billion  | % of total |
|----------------------------------|------------|------------|
| <b>Retail</b>                    | <b>340</b> | <b>43</b>  |
| Shopping Centres                 | 66         | 8          |
| Retail warehouses                | 52         | 7          |
| Other retail (eg foodstore)      | 221        | 28         |
| <b>Offices</b>                   | <b>234</b> | <b>30</b>  |
| London                           | 149        | 19         |
| South East                       | 28         | 4          |
| Rest of UK                       | 57         | 7          |
| <b>Industrial</b>                | <b>148</b> | <b>19</b>  |
| London & South East              | 58         | 7          |
| Rest of UK                       | 91         | 12         |
| <b>Other Commercial</b>          | <b>65</b>  | <b>8</b>   |
| Hotels                           | 29         | 4          |
| Leisure                          | 16         | 2          |
| Misc other commercial            | 20         | 13         |
| <b>Total Commercial Property</b> | <b>787</b> | <b>100</b> |
| of which London                  | 286        | 36         |

(please note figures may not add to totals due to rounding of figures)





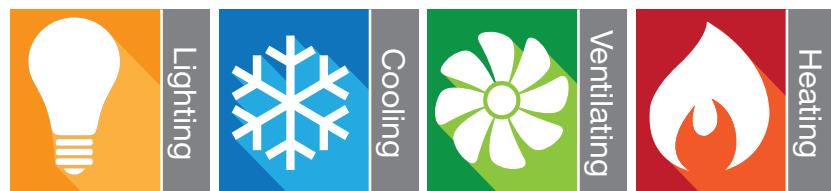
## Compliance with Minimum Energy Efficiency Standards - taking action

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The MEES is a regulation that will require landlords to think carefully about their energy efficiency, and considering what they can do to ensure their building meets the requirements.

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**The main energy users in commercial buildings are:**



Heating, ventilating and air conditioning generally use about half the energy in a non-dwelling.

Older air conditioning equipment can use up to 50% more energy than new technology, which can also provide excellent internal environments for occupants.

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Given the time scales, it may well be useful to review the current condition of these systems in a building and make decisions about upgrades and replacements.

What's more, the latest air conditioning and heating technologies have been designed with retrofitting and refurbishment very much in mind. One example is the Mitsubishi Electric Replace technology which has been developed to enable managers of existing buildings to easily install new air conditioning systems with minimum disruption. The case for replacing older air conditioning systems is particularly strong if they are based on the R22 refrigerant - which has been phased out under the F-Gas regulations.

There are also alternatives to consider such as Hybrid VRF (H-VRF) air conditioning - which uses water to transfer cooling and heating. This H-VRF approach is unique to Mitsubishi Electric and is ideal for all environments where VRF could be applied. Again, there is an added benefit because the use of water in occupied spaces removes the requirement for leakage detection which has been introduced recently.

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Heat pump technology is another well-established modern alternative to traditional heating and cooling systems, and is also considered a renewable technology, which helps to improve the EPC rating of a building. Heat pump-based systems are now available that suit the commercial built environment and there are numerous examples of applications in non-dwellings. It may also be possible to consider the use of heat recovery technology which greatly reduces energy requirements for heating and cooling, along with running costs for these systems.

Whatever the choice of technology, the important point is that doing nothing is not an option. Unless your buildings have extremely high EPC bands of A or B, the next twelve months should be an opportunity to review the state of the building and assess where the best and most cost-effective improvements can be made.

Ultimately, replacing aging air conditioning systems, for example, will not only save money from the day they're installed, it will also result in fewer operational problems and less downtime.

**The MEES is just one good reason to start the process as soon as possible.**



To receive a CPD seminar on 'Minimum Energy Efficiency Standards for Non-dwellings', you can call your Mitsubishi Electric Regional Sales Office to arrange an in-house presentation of this information.

If you would like to receive invitations to future CPD events, please email [livingenvironmentalsystems@meuk.mee.com](mailto:livingenvironmentalsystems@meuk.mee.com)

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