

<i>Title of the measure:</i>	FRA10 Periodic mandatory inspection of boilers
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General description

Between March 2007 and June 2009

Since March 2007, articles R. 224-31 to R. 224-41 of the Code of the Environment impose a mandatory periodic inspection **for thermal installation higher than 1 MW**. This inspection must be realized by approved technical organizations. This measure aims at making sure that the boilers respect the lawful minimal outputs and that the owners proceed to adjustment and check operations.

These periodic inspections check :

- The output characteristics of each boiler which must satisfy the outputs mentioned by articles 4 to 6 of the decree of September 11, 1998.
- The existence of the measuring devices introduced by articles 7 and 8 of the decree of September 11, 1998 and their good state of operation.
- The quality of the combustion and the good performance of the boilers.
- The quality and the good performance of thermal energy distribution devices.
- The good state of the booklet of boiler room as defined in article 10 of the decree of September 11, 1998.

Since September 15th 2009

Regular checking of boilers (< 400 kW)

The new Regulations on boiler maintenance apply from 31st October 2009. They concern all boilers (gas, domestic fuel oil, biomass and multifuel) of an output between 4 and 400 kW.

Maintenance must, as previously, be carried out every year. A maintenance certificate must be given to the client no later than 15 days after the visit and kept for two years by the client to produce in the event of a check. This certificate is new and informs the client about the state of their boiler and central heating system. Maintenance must be carried out by a qualified professional.

The operations to be performed during maintenance have been specified and considerably strengthened:

- Checking of the boiler and, if necessary, cleaning and adjustment
- Measurement of CO levels
- Evaluation of boiler energy and environmental performance
- Evaluation of boiler performance compared with the best-performing boilers currently on the market
- Evaluation of boiler air pollutant emissions compared with those of the best-performing boilers currently on the market (NO_x for gas and domestic fuel oil boilers, VOC and dust for biomass boilers)
- Advice: proper usage, improvement of the boiler and system installed and possible benefit from replacing the installation

Thus, it should be noted that these new regulations **integrate environmental, energy and public health issues at the same time**.

Maintenance certificate: a regular and customised awareness-raising and information tool.

The certificate includes the list of operations performed during maintenance, the result of measurement of CO level, the result of evaluation of energy and environmental performance and the advice provided. It



must be given to the client, who must sign it. This provides confirmation that they have indeed received the certificate. Handover of the certificate should also be the time for discussion of heating system performance and the advice offered.

Regular checking of boilers (> 400 kW)

Boilers of an output of between 400 kW and 20 MW are subject to minimum energy performances. The operator is also required to install equipment:

- to check and measure performance,
- to assess combustion quality.

In addition, they undergo a mandatory check, at least once every two years, to ensure that they meet minimum regulatory performance standards and that operators are undertaking the control and adjustment measures required of them.

Equivalence between measures put in place under Article 14(4) and those referred to Article 14(1) to 14(3) of Directive 2010/31/EU on the energy performance of buildings

France has opted to transpose Article 14 of the Directive on the energy performance of buildings in line with paragraph 4.

To that end, Article L. 224-1 of the Environment Code makes provision, depending on the output of the equipment concerned, for regular checking or inspection of boilers.

France has elected to provide customised advice to users in two ways:

- firstly, **customised advice to users** during regular boiler visits;
- secondly, provision of **advice at national level** on the most efficient heating systems, on improving the energy performance of buildings and on financial support.

Customised advice provided during regular visits

For boilers between 4 and 400 kW, advice is given to the user on proper usage of the boiler, its replacement, other possible modifications to the heating system and alternative solutions (use of a renewable energy system, for example) during the annual maintenance procedure.

At the same time, the energy, environmental and public health aspects of this procedure have been strengthened. This has required wider consultation with the Ministries responsible for energy, environment, construction, industry and health.

A maintenance certificate, providing customised advice, has been created: this certificate will be requested in the event of an inspection by State officials and may be requested by insurance companies or landlords.

To support implementation of these new regulations, the Ministry of Ecology, Energy, Sustainable Development and the Energy Management Agency (ADEME) have produced a **practical guide** to annual boiler maintenance, **aimed at private individuals**. The guide was published in December 2009 and more than 50 000 guides were distributed in the first half of 2010. It is also available for download, free of charge, on the ADEME and MEDDTL websites: www.ademe.fr or www.developpementdurable.gouv.fr.

In addition, the associations of maintenance professionals have come together to produce a data sheet guide for professionals, in order to ensure early correct application of the new regulations. (<http://www.energies-avenir.fr/>).

Lastly, the MEDDTL website (www.developpement-durable.gouv.fr) sets out the provisions of the new regulations and contains questions and answers to assist understanding of the new provisions.

For boilers of between 400 kilowatts and 20 megawatts, the procedure for regular checking has also been strengthened (increased frequency of regular checks (two years), measurement of air pollutant emissions, etc.) and advice is given by ADEME regarding energy savings.

Impact evaluation (methods and results)

Measure Impact Level

low

medium

high

Definition of impact:

Low: CO2 savings < 0.1% of overall CO2 emission in “household”

Medium: between 0.1 and 0.5%

High: > 0.5%

Interaction of measures

HOU-FRA3 EU-related: Energy Performance of Buildings EPBD Recast (Directive 2010/31/EU) - Minimum energy performances of boilers

Historical data

Directive 2002/91/EC of 16 December 2002 on the energy performance of buildings has been implemented in particular by law n° 2005-781 of 13 July 2005 on guidelines for energy policy and the law n° 2008-757 of 1 August 2008 on environmental liability.

In particular, Article 8 of the Directive, option b) provides that Member States shall take the necessary measures to ensure that users receive advice on the replacement of the boilers and alternative solutions which may include inspections to assess the efficiency and appropriate size of the boiler. This provision has been implemented through the amendment of Article L.224-1 of the Environmental Code.

Decree No. 2009-649 of 9 June 2009 relating to the annual maintenance of boilers with an output power between 4 and 400 kilowatts introduced into the Environmental Code the obligation, laid down in Article 8 of Directive, to provide **advice and recommendations** on boilers during the compulsory annual maintenance.

References

Maintenance of boilers of between 4 kW and 400 kW

- Directive 2002/91/EC on the energy performance of buildings
- Directive 2010/31/EU of the European Parliament and of the Council of 19 May 2010 on the energy performance of buildings, Article 14
- Law No. 2005-781 of 13 July 2005 on guidelines for energy policy
- Law No 2008-757 of 1 August 2008 on environmental responsibility and various provisions adapting to Community law in the environment field > II(2) of Article L224-1 of the Environment Code
- Decree No 2009-649 of 9 June 2009 on annual maintenance of boilers of a rated output of between 4 kilowatts and 400 kilowatts (Decree implementing Law No 2008-757 of 1 August 2008)
- Order of 15 September 2009 on annual maintenance of boilers of a rated output of between 4 kilowatts and 400 kilowatts

Periodic control of energy efficiency and polluting emissions of boilers of between 400kW and 20 MW

- Decree No 2009-648 of 9 June 2009 on control of boilers of a rated output of more than 400 kilowatts and less than 20 megawatts; Articles R. 224-31 to R. 224-41-3 of the Environment Code.

<http://www.developpement-durable.gouv.fr/-Entretien-et-contrôle-des-.html>

- Practical guide to annual boiler maintenance:

http://www.ecocitoyens.ademe.fr/sites/default/files/fiche_ademe_entretien_chaudières.pdf



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