



Italian Agency for New Technologies
Energy and the Environment

**Survey on
Small Combustion Installations
in the Commercial Sector
in Italy**

State of the work

T. Pignatelli - ENEA

EGTEI meeting – Paris, 10th of April, 2006



**Italian Agency for New Technologies
Energy and the Environment**

Survey on Small Combustion Installations

Initiative announced at the WG S&R Meeting, Sept 2005

Works carried out jointly by ENEA and National Labor Bank of Italy

The survey concerns Small Combustion Plants operated by BNL in its own agencies, on the Italian territory, for heating use

Survey started in January 2006

Main objective : collection of techno-economic data to be made available for the purposes of EGTEI

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Where we are now

Technical sheets for hundreds of plants have been collected

From a first view, 2 main classes of boilers can be distinguished :

1) Horizontal boilers(ranging between 35 and 685 kW)

RAINS_Category: Medium boilers (<1 MW)

2) Vertical wall boilers (below 35 kW)

RAINS_Category: Single house boilers (<50 kW)

Both classes burns **oil** or **gas** and are **manual/automatic**

No abatement technologies seem to be applied, with the exception of regular maitenance

Proposed methodology for the analysis

Statistical analysis (distribution of boilers in size sub-classes) to identify 1 or more predominant boiler sizes, as Reference Installation

Collection of data on annual fuel consumption, for each identified Reference Installation

Analysis of the flue gases, (in a number of cases available from the maintenance practices) to evaluate Emission Factors

**This methodology should provide a picture
of the current situation**

A look to the future

From the discussion with the BNL Energy Manager (Dr. Cavallari):

A look to the future (within next 5 years) provides indications of:

- **fuel switching from oil to gas for medium boilers, as possible**
 - **increased electricity consumptions for conditioning**
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Constraints to the analysis

Data on costs are poor and global (e.g. kEuros/m²)

Some cost data could be restricted because market sensitive

Future perspectives are limited to the next few years

Suggestions are welcome!
