Country: ITALY

Pollutant(s): Particulate matter, Volatile Organic Compounds, Polycyclic Aromatic Hydrocarbons

Protocol(s):
The 1998 Aarhus Protocol on Persistent Organic Pollutants (POPs)
The 1991 Geneva Protocol concerning the Control of Emissions of Volatile Organic Compounds or their Transboundary Fluxes

Sector: Residential sector - Domestic heating

Type of strategy, policy or measure and the level of implementation:
Regulatory measure at National level

Method used for the current analysis:
GAINS Italy for emission scenarios – Air quality modelling

What is the main objective of the strategy, policy or measure? When has it been implemented/or will be implemented?
The main objective of the regulation is promoting the gradual replacement of old domestic plants burning wood with new appliances, more efficient in terms of environmental performance.

For this purpose an environmental certification is introduced, by means of a classification based upon the emission levels of stoves, fireplaces, cooks and small boilers with a thermal input <= 500 kw.

The classification introduced at National level was the necessary instrument allowing National and Regional Authorities to adopt measures to reduce air pollution from this sector. In particular, in some Regions of the most critical areas the ban of the less efficient plants has already been established and incentives for the diffusion of low emissions plants have been introduced at National level.

The National regulation anticipates the dispositions of Ecodesign directive, being entered into force in November 2017.

Background and driving forces:
Air quality limit values established for PM are exceeded in many areas of Italy, particularly in the Po Valley and PAH concentrations are also a problem in several rural areas, particularly in the Alpine valleys. With reference to the National emission inventory compiled for 2016, the domestic sector is responsible for 65% of PM2.5 emissions, for 69% of PAH emissions and for 40% of the dioxin/furans emissions and this is mainly due to wood combustion. Therefore, the introduction of emission reduction measures in the domestic sector is a priority and reducing wood combustion or at least promoting the diffusion of lower emission domestic wood plants is an important measure in the attempt of fulfilling the commitments on the emission reduction targets and air quality standards.

Description of the strategy, policy or measure:
The regulation establishes procedures and requirements for environmental authorization system and certification of wood, charcoal and biomass fuel in domestic heating plants. Furthermore, the regulation identifies the reference emission levels for each different quality class of plant, the related trial run and the tests to be performed in order to obtain the environmental certification. The regulation also provides directions on the correct installation and management procedures for heating plants licensed with the environmental certification. A quality classification (in a range between 1 and 5 stars) is provided based on the plant emission values, for the concerned pollutants.

Such classification established at National level is then used by the authorities as a support for
adopting specific policies related to this sector. At local level, some Regions in the Po Valley have banned the use of the most polluting plants with a gradual approach: the ban is already in place for some categories and will be extended in the next two years. Incentives have also been granted for purchasing the lower emission plants. In particular, only the plants with higher classification level (above 3 stars) may be subsidised.

**Costs, Funding and Revenue allocation:**
The Ministerial Decree 16/02/2016 (the so called “conto termico 2.0”) allocates 800 millions of euros, per year, for a complex of measures related the thermal sector. This fund, established to provide incentives to promote energy efficiency and the production of heat by renewable energy, can be used also for domestic heating and includes resources for private and Public Administrations.

**Effect and impacts on air pollution abatement:**
Since the regulation entered into force last November, it is not possible to quantify its impact at the moment but significant emission abatements and consequently lower impacts on human health are expected as result of the implementation. The diffusion in the market and a larger dissemination of high efficiency pellets stoves, closed fireplaces and small boilers are also expected.

A modelling exercise was carried out before the adoption of the regulation, therefore some estimations of the expected results are available for the Po Valley.

**References/Further information:**
Ministerial Decree on environmental certification n. 186, 7 November 2017
Ministerial Decree 16 February 2016

**Contact:**
Name: Cristina Leonardi  
Country: Italy  
Organization: Italian Ministry for the Environment, Land and Sea  
Address: Via Cristoforo Colombo, 44, 00147 Roma  
Telephone: +39 06 57225040  
Email: leonardi.cristina@minambiente.it

**Additional comments:** Additional information will be provided at the WGSR session.