



Task Force on Techno-Economic Issues

“Code of good practice for solid-fuel burning
and small combustion installations based on
BAT)”

Co-Chairs:

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Workplan 2018-2019



Following the recommendations of the Policy Review Group (PRG) of the LRTAP Convention

Item 2.3.8 -

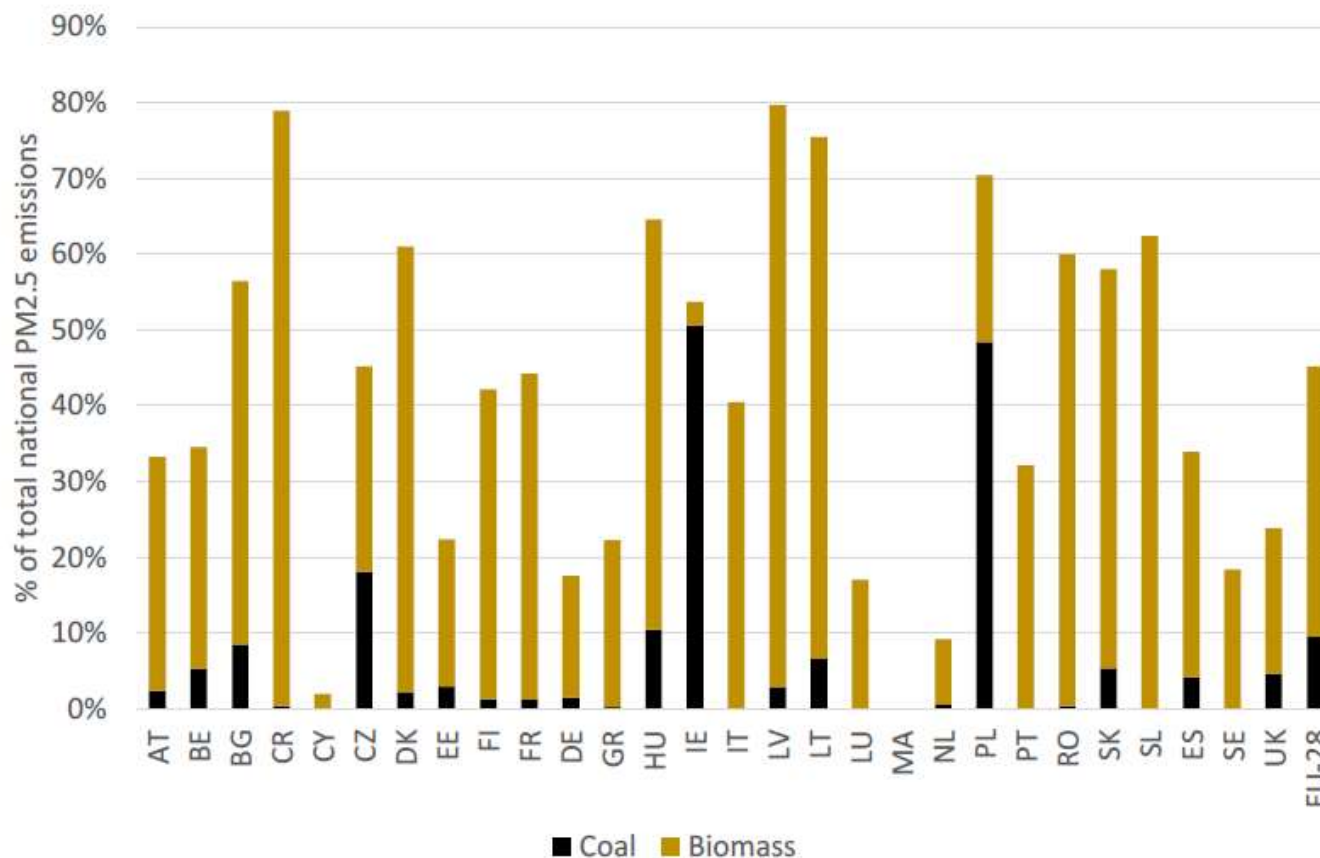
Description - Integration of additional measures in the TFTEI Clearing House for Control Technologies, and ***development of a code of good practice for solid-fuel burning and small combustion installations based on BAT***

Deliverables

Update of the TFTEI database; ***draft code of good practice for solid-fuel burning and small combustion installations based on BAT***

To be submitted to WGSR_57 in May 2019

Why emission reductions from small combustion installations in the residential sector, are important ?



Contribution of Household Heating to PM_{2.5} total emissions in EU (Report by IIASA, february 2018)

Why the issue should be of interest for EECCA countries ?



Reduction of PM_{2,5} emissions from the sector of residential heating may be helpful to achieve the Gothenburg Protocol target and therefore facilitate the signing/ratification.

The reduction of PM_{2,5} and other harmful pollutants (PM₁₀, BC, PAH, B(a)P) reduces the risk of negative effects on the human health and the environment. Since BC is a Short Life Climate Pollutant (SLCP), synergy with the Climate Change exists.

Many measures linked with good practice are related with behavioral aspects of final users and therefore are easy to implement and often costless.

Two complementary approaches to the emission reduction in domestic heating



Measures to address air pollution from small combustion sources (Report IIASA – february 2018)

Technology

“End-of-pipe technologies, i.e. electrostatic precipitators, might be foreseen for existing facilities, however, shorter intervals for maintenance and regular checks for appropriate fuel have to be considered “

Good practice

“Additionally, emissions can be reduced by changing the way wood is ignited, i.e., starting the fire on the top of the fuel stack; awareness campaigns could help to disseminate information about such practice. “

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Main Objectives

Provide a guidance, based on good practice, with practical information aimed at improving the efficiency of combustion of solid fuels in small combustion installations for domestic heating.

Reduce PM, BC, PAH, B(a)P and other combustion pollutant emissions and related impact on environment and human health.

As effect of the improved efficiency, the reduced BC emissions have benefits also on Climate Change.

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Development of the Code

Initially, the drafting of the code has started on the basis of existing guidance documents developed by the Regional Environment Protection Authorities of some Italian Northern Regions, re-elaborated by ENEA (Italy) experts. Attention is focused on the small combustion installations, with power **not larger than 100 kW**. Draft presented at WGSR_56.

The further development of the code will take place through integration of contributions both from the experts of the Task Force and the experts of the whole Convention who have expressed the will to contribute (Belgium, Poland, Sweden, Switzerland, Ireland, US, Canada).

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What you can find in the document

- Preface
- Scope of the document
- Definitions
- Survey of existing guidance documents in some Countries
- Solid fuel burning and air pollution
- Solid fuel burning and climate change
- ***Recommendations on : plant choice, fuel choice, fuel loading, firing, combustion, maintenance***
- Special section dedicated to the EECCA countries (tentatively)
- Section on “Best Available Techniques in SCI “
- Conclusions

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Examples of recommendations – Fuel Choice

Burn dry seasoned wood. **Dry wood** lights up and burns easily while, with the increasing of percentage of **humidity content** in the wood, the ignition becomes more difficult.

Moist wood or **green wood** (not seasoned) would never be burnt (more smoke is generated in these cases). The wood properly seasoned is darker, shows some slits on the logs and generates an empty sound when hitting against other logs.

If the wood is collected on your own, it is recommended to **leave it to dry, at least for 2 years**, before using it for burning. Smaller logs allow a better storage before the use and a better combustion, in general.

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Examples of recommendations – Fuel Choice (cont'd)

The use of **same size logs**, preferably **split** rather than in round logs, is recommended.

It is recommended that the wood logs have **adequate size**, avoiding logs **longer than 40 cm** and **wider than 15 cm**. Smaller logs allow a better storage before the use and a better combustion, in general.

An empty space between the wall of the combustion chamber and the wood logs should also be left to facilitate the combustion.

... it is strongly **advised against the use of treated wood**, waste wood from building demolition or renovation, wood for packaging, wood from furniture, because the combustion of such materials may release toxic substances, which are harmful for the human health.

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Examples of recommendations – Fuel Loading and Ignition

Good quality combustion needs the **correct loading** of the fuel wood.

When the combustion chamber is narrow the wood logs should be loaded “**front head**” and **horizontally**.

Othewise, when the combustion chamber is narrow but high, then the wood logs should be loaded **vertically**.

The ignition should take place **from above** (vertically) by the use of dry sticks, set up at headframe, and **proper lighters**.

The **use of paper** for ignition should be **always avoided**.

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Further work

As result of the discussion taking place with all the experts and advices from WGSR members, the further development of the code will develop

- *Section dedicated to innovative technologies and BAT*
- *Fuels other than biomass/wood (coal)*

Discussion of the code at the TFTEI annual meeting 2018, in Brussels, in a dedicated technical session, on the 17th of October. Text finalized in spring 2019.

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Conclusions

The Code of Good Practice is thought to have the largest applicability within the geographical scope of the Convention.

The implementation of the Code of Good Practice is expected to result in significant emission reductions from the sector.

Many of the recommendations proposed in the code are at low cost or even costless.

The implementation of the code in EECCA countries may contribute to the signing/ratification of the GP.

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You are welcome to visit the TFTEI Official web site:



О нас

В декабре 2014 г. на 33-й сессии Исполнительный орган Конвенции о трансграничном загрязнении воздуха на большие расстояния (ТЗВБР) Европейской экономической комиссии ООН (ЕЭК ООН) утвердил преобразование Группы экспертов по технико-экономическим вопросам (ГЭ ТЭВ) в Целевую группу по технико-экономическим вопросам (ЦГ ТЭВ) (см. мандат ниже) и вхождение в состав ЦГ ТЭВ прекративших свою деятельность Целевой группы по тяжелым металлам и Целевой группы по СОЗ ([решение ИО 2014/2](#)). Бывшая Группа экспертов по технико-экономическим вопросам (ГЭ ТЭВ) была создана ИО в декабре 2001 г. в ответ на предложение [Министерства экологии, устойчивого развития и энергетики Франции \(МЕДДЕ\)](#).

Целевая группа отчитывается перед Рабочей группой по стратегиям и обзору (РГСО) на ежегодных сессиях РГСО (<http://www.unece.org/env/lrtap/workinggroups/wgs/welcome.html>).

ЦГ ТЭВ возглавляют Франция и Италия, которые совместно отвечают за руководство деятельностью группы. Италия стала сопредседателем в 2006 г. по приглашению Франции.

Сопредседателями ЦГ ТЭВ являются Жан-Ги Бартэр ([ЭДФ – Электрисите де Франс](#)) и Тициано Пиньятели ([Итальянское национальное агентство по новым технологиям, энергетике и устойчивому экономическому развитию \(ЕНЕА\)](#)).

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You are welcome to visit the TFTEI Official web site:

<http://tftei.citepa.org/ru/> (Russian Language)

<http://tftei.citepa.org/en/> (English Language)

Thank you for your attention !

Спасибо за внимание