# 1.A.4.c.i - Agriculture/Forestry/Fishing: Stationary



### Short description

In source category 1.A.4.c.i - Agriculture/Forestry/Fishing: Stationary emissions from smaller combustion plants in agricultural facilities and greenhouses are reported.

Category Code	Method				AD				EF						
1.A.4.c.i	T2, T3				NS				CS, D						
	NO <sub>x</sub>	NMVOC	SO <sub>2</sub>	NH₃	PM <sub>2.5</sub>	<b>PM</b> <sub>10</sub>	TSP	BC	со	PB	Cd	Hg	Diox	PAH	HCB
Key Category:	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-	-/-
<b>T</b> = key source b	by Tre	end $L = k$	æy s	ource	e by Le	evel									
Methods															
	D				Defau	ılt									

RA		Reference Approach						
T1		Tier 1 / Simple Methodology *						
Т2		Tier 2*						
Т3		Tier 3 / Detailed Methodology *						
C		CORINAIR						
CS		Country Specific						
М		4odel						
* as described in the EM	IEP/CORINAIR Er	nission Inventory Guidebook - 2007, in the group specific chapters.						
AD - Data Source for	Activity Data							
<b>NS</b> National Statistics								
<b>RS</b> Regional Statistics								
IS International Statisti	CS							
PS Plant Specific data								
AS Associations, busines	ss organisations	5						
<b>Q</b> specific questionnair	res, surveys							
<b>EF - Emission Factors</b>								
Default (EMEP Guide	book)							
C Confidential								
CS Country Specific								
PS Plant Specific data								

### Methodology

#### Activity data

For further information on activity data please refer to the superordinte chapter on small stationary combustion.

#### **Emission factors**

For further information on the emission factors applied please refer to the superordinte chapter on small stationary combustion.

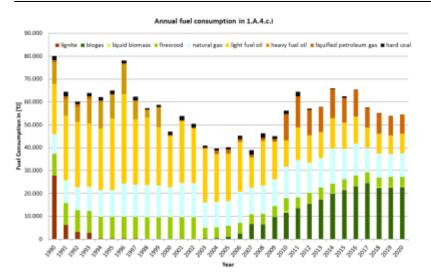
Table 1: Emission factors for commercial and institutional combustion installations

Pollutant	NOx	SOx	СО	ΝΜVΟC	TSP	<b>PM</b> <sub>10</sub>	PM <sub>2.5</sub>	PAH	PCDD/F
Fuel			Fuel	[kg/TJ]					
Hard Coal	76.2	331.7	2,709	48.4	18.5	17.6	15.7	19,215	16.3
<b>Residual Wood</b>	79.2	6.5	2,285	122.1	84.2	81.6	76.9	144,957	355.3
Light Fuel Oil	43.7	3.3	11.9	2.6	1.0	1.0	1.0	20.10	2.7
Natural Gas	27.2	0.1	11.1	0.36	0.03	0.03	0.03	3.08	1.6

TSP and PM emission factors are to a large extend based on measurements without condensed compounds, according to CEN-TS 15883, annex I.

### **Trend Discussion for Key Sources**

The following charts give an overview and assistance for explaining dominant emission trends of selected pollutants.



Annual fluctuations of all fuel types in source category 1.A.4 depend on heat demand subject to winter temperatures. Between 1990 and 2014 the fuel use changed considerably from coal & lignite to natural gas. The consumption of light heating oil decreased as well. As the activity data for light heating oil is based on the sold amount, it fluctuates due to fuel prices and changing storage amounts.

## Recalculations

Recalculations were necessary for the time series from 2003 to 2019 due to the change of the activity data source.

Furthermore, compared to submission 2021, PAH emissions have been recalculated for all small combustion sources due to a revision of emission factors applied.

For specific **information on recalculated emission estimates for Base Year and 2019**, please see the pollutant specific recalculation tables following chapter 8.1 - Recalculations.

### **Planned improvements**

There is a running Project on new emission factors for small combustion plants using updated data from the chimney sweepers and new measurement data.