

## Short Description

Here you can find information about energy-intensive mineral industry regarding fuel use for burning processes.

In order of significance relating energy use and emissions the industries are ranked below:

burning of cement clinker,  
burning of quicklime,  
melting of glass,  
burning of ceramics.

NFR-Code Name of Category Method AD EF Key Category 1 1.A.2.f Non-Metallic Minerals T1 NS CS L & T: CO + Show Legend Method

Regarding the burning processes emissions can be allocated to the use of fuels or to the production process. Current allocation is regarding the main importance of the production process. Activity data

The key source of all conventional fuel data is the national energy balance. Moreover the use of additional statistical data is necessary in order to disaggregate data. Data source for fuel inputs for energy-related process combustion in cement industry are manufacturing-sector statistics (Statistik des produzierenden Gewerbes); reporting number (Melde-Nr.) 23.51, Cement production. Furthermore the cement industry uses significant amounts of substitute fuels that do not appear in national statistics and in the Energy Balance. Relevant production figures and fuel-use amounts have been taken from statistics of the VDZ cement-industry association. The fuel-input data for ceramics production has also been taken from manufacturing industry statistics (Statistik des produzierenden Gewerbes); reporting no. (Melde-Nr.) 23.32, brickworks (Ziegelei), production of other construction ceramics. The same statistic is also used as source for fuel input of glass (reporting number: 23.1, Production of glass and glassware) and lime production (reporting number: 23.52, Lime). Emissions

Due to allocating emissions to process part we have removed most of time series inconsistencies. The current situation is the following: Table 1: relevance of emission sources regarding the fuel use due to burning processes of Non-Metallic Minerals Pollutant SO<sub>x</sub> NO<sub>x</sub> TSP CO NMVOC NH<sub>3</sub> cement IE1 IE1 IE2 medium IE1 IE1 lime IE1 IE1 IE2 high IE1 low glass IE1 IE1 IE2 low IE1 IE1 ceramics IE1 IE1 IE1 IE1 IE1 IE1

The table gives an overview of relevant gases - with following remarks: 1 Included in process related emissions, in all cases it is the link to complementary source category. 2 In case of TSP, some artifacts occur for 1990 emissions that cannot be shifted. 3 Inclusion in process related emissions occurs from different time points onwards.

The entire appraisal of the emissions situation succeeds only in connection with the process related emissions. Especially further relevant pollutants as heavy metals or persistent organics are shown as process related generally. Planned improvements

At the moment, no category-specific improvements are planned.