CEMBUREAU: "WHY CO-INCINERATION OF WASTE SHOULD BE TAXONOMY-COMPLIANT"

Brussels, 13/11/2020

CEMBUREAU wishes to highlight the positive impacts of the use of RDF in the cement industry through co-processing that are well known and documented in public available reports, EU legislation and EU BREF documents.

- The use of Refused derived fuels (RDF) in cement kilns is an environmentally sustainable activity and is essential to the circular economy. The waste used in cement kilns consists of non-recyclable waste and biomass waste which would otherwise be landfilled. In fact, the use in cement plants reduces waste disposal costs for society and is highly valued by municipalities and communities.
- The use of alternative fuels such as RDF in cement kilns delivers significant CO2 emissions reduction through the phase out of fossil fuels from cement production. For the year 2018, the EU cement sector substituted 48% its thermal energy needs with alternative fuels, which resulted to 21.7 million tonnes of avoided CO_2 emissions[1].
- The use of waste such as RDF by the cement industry does not "compete" with the management of waste. The cement industry is in favour of the separate collection and sorting of waste so that a maximum of waste can be recycled in closed loop systems where possible. If the cement industry would not use RDF in their operations, the global environmental impacts resulting from the incineration or landfilling of those non-recyclable fractions of waste would be much higher.
- Co-processing is fundamentally different to waste incineration in terms of purpose and environmental impacts. Firstly, the main purpose of cement plants is to produce cement whilst incinerators are dedicated facilities for the disposal of waste. Secondly, co-processing is for the European cement industry a unique opportunity to reduce emissions by phasing out more polluting fossil fuels. Thirdly, co-processing not only allows for energy recovery, but also for recycling of the inorganic components of wastes into the clinker/cement.
- Last but not least, CEMBUREAU wishes to highlight that the cement industry has a strong track record in the safe handling and treatment of waste, all cement plants have received their permits under the rules set out in the Industrial Emissions Directive and in the Cement & Lime BREF which has defined the "Best Available Techniques" and has been elaborated with full knowledge of the conditions in which RDF were used in the cement sector.

[1] Global Cement & Concrete Association - Get the Number Right database https://gccassociation.org/sustainability-innovation/gnr-gcca-in-numbers/

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ANNEX

Our full detailed response to the Zero Waste Europe Advisory Statement

CEMBUREAU fundamentally disagrees with the paper from Zero Waste Europe, which contains factually incorrect information on a large number of points but is also based on poor scientific research and recourse to generalities.

The Zero Waste Europe Advisory Statement (hereafter the "Statement") contains the following factual errors and misleading statements:

Page 2 of the Statement:

- ✓ Table 1 presented on page 2 of the Statement is based on data that are not only outdated but also cross referenced from other sources that have not been properly verified as to the methodology or definitions used. The 2017 IFC paper referenced in footnote to that table is itself based on data taken from cement sustainability reports of 2011 and, unfortunately, the IFC Report did not provide complete data for the companies listed in the table.
- ✓ In addition, the 2017 IFC Report concluded that "*The analysis reveals that CO2 emission and other air emissions such as NO_X, SO_2 and dust can be reduced by increasing the usage of AFs."* A conclusion that was either not noted or deliberately omitted by the authors of the Statement.
- ✓ Finally, it is relevant to note that not all alternative fuels are Refuse Derived Fuels (RDF). RDF is the residual fraction from waste which has already been processed to remove the fractions which can be recycled as far as technically possible and financially viable to do so. The fraction which is left would go to landfill if it were not further processed to make it suitable to be used as an alternative fuel.

Page 3 of the Statement

- ✓ In the first three paragraphs, the Statement
  - alleges that "*the term alternative fuel has often been used to disguise the fact that this "fuel" is actually of fossil origin*" and puts a specific emphasis on the use of plastics;
  - claims that, under EU ETS, the cement industry has been able to claim credits from burning waste because it reduces the use of fossil fuels;
  - asserts that the IED allows for higher NOx and dust emission levels for cement kilns compared to incinerators.

Our response to each of these points:

- RDF is a residual fraction of waste of End of Life (EoL) materials and not a fossil fuel (such as oil, gas or coal), but an alternative fuel which contains both biomass waste and non-biomass waste materials.
- The cement industry does not use plastics as such. Plastics is only a part of the RDF which is produced from the share of municipal or industrial waste that cannot be recycled, mainly due to the huge variety of constituents or the intensity of energy required by potential alternative options. With that in view, the cement industry offers a complementarity and a support to other recycling activities.
- The cement industry takes up 12.3 million tonnes of alternative fuels per year, largely from industrial waste sources. The municipal solid waste generated annually in the EU amounts to 250 million tonnes per year so there is still ample opportunity and incentive to minimize waste.

- Tyres, paints and other waste streams are not RDF but are separate waste streams which are processed by other waste industries and can be developed into alternative fuels where they are not able to be recycled.
- when waste fuels are used in a cement kiln there has been significant investment in the equipment needed to handle and store these materials and also in all the testing needed to get authorisation to use these fuels from the national authorities, during which it has to be shown there is an environmental benefit. To get permission to use an alternative fuel, it is necessary that the fuel is pre-processed so that it conforms with the specification agreed with the national authorities;
- on EU ETS: all fuels, including alternative fuels, are tested and, from these tests, it is possible to determine the emissions from each fuel; the total fuel emissions are then determined and only the biomass waste fractions are zero rated, for all others, allowances need to be surrendered under EU ETS;
- It is further factually incorrect and misleading to state that there are higher emissions ceilings for cement plants in comparison with dedicated waste incineration plants. The basis for comparison is not the same as air emissions of incinerators are determined by the fuel input whereas air emissions of cement plants are mainly determined by the raw materials in combination with the special clinker process burning technology (counter-current principle). In addition, for a cement plant there are only emissions to air and no waste products whereas a typical incineration plant also releases solid emission and waste water to the environment. In relation to air emissions, these are regulated under the Industrial Emissions Directive (IED) and each and every cement plant in the EU operates in accordance with a permit granted by the authorities in the Member States following the principles and provisions of the IED. Both incinerators and cement plants have equipment to pre-treat the final emissions, such as a modern filtering device to reduce dust levels and Selective Catalytic or Non-Catalytic Reduction techniques (SCR or SNCR) to reduce levels of NOx.

✓ Page 3 of the Statement which alleges "*Burning RDF in cement kilns makes climate change worse*"

Our response:

- Official sources clearly demonstrate that fossil fuels such have higher CO2 emission factors such as coal (96 tCO2/TJ) and pet coke (92.8 tCO2/TJ) compared to alternative fossil fuels such as RDF (35-55 kgCO2/GJ)[2]
- The direct emissions reference in the Statement refers to 2009 figures and to waste-to-energy plants, not cement plants;
- The use of gas instead of alternative fuels would result in increased emissions if it were used in place of alternative fuels. This is because non-recyclable waste would have to still be deposed by incineration or landfill. Using non-recyclable waste materials to replace fossil fuels lowers overall emissions.
- As a result, the Statement makes exactly the opposite point of what they wish to contend; it implies that it would be environmentally irresponsible to divert investment away from the use of waste in cement manufacturing which takes residual end of life materials and gives them a higher value, long-lived second life

[2] Global Cement & Concrete Association - Get the Number Right database https://gccassociation.org/sustainability-innovation/gnr-gcca-in-numbers/

✓ Page 3 of the Statement which alleges that "environmental impacts from co-incineration are severe"

Our response:

- Emissions from industry including the cement industry are carefully and strictly regulated by national authorities and these have to comply with EU wide limits set under IED for all types of emissions. The use of alternative fuels reduces the use of fossil fuels and makes use of End-of-Life materials which would otherwise go for incineration or landfill, and if not used in cement kilns would need more incineration alternatives and would double emissions. Under the IED, co-processing is more strictly controlled than traditional more polluting fossil fuels.

Page 4 of the statement

✓ Plant examples quoted

Our response:

- All plants fully comply with the emission limit values set by the IPPC permit in compliance with the IED; in some of the plants referred to, the kiln air emissions are even considerably lower than the emission limit values
- No relationship has been found between air emissions and alternative fuels rate
- Plants provide regular health impact assessment reports to the competent authorities and there have been no reports on negative health impact due to the use of RDF.

✓ The Statement alleges that "*Legislation on co-incineration is outdated and inadequate*"

Our response:

- as stated before, the IED is an EU Commission led process that involves industry experts from different industries and consultants working for the EU Commission to review the best available technologies to reduce industrial emissions and set emissions at level that are not harmful to society
- the generic nature of this statement is staggering: the cement industry is not the only industry subject to the IED rules, yet the alleged outdated and inadequate character of the legislation is used to single out the cement industry as "therefore not eligible for taxonomy";

✓ The Statement says that "Co-incineration harms the circular economy, waste prevention, re-use and recycling" by referring to the fact that the cement industry takes in waste that would otherwise be recycled

Our response:

- Such statement is factually incorrect. The cement industry is taking up residues from recycling operations such as distillation residues from solvent recycling, non-recyclable insulation foam from old fridges, the residual fine fraction from the recycling of wood. If the cement industry would not use the residues from recycling operations, the global environmental impacts resulting from the incineration or landfilling of those non-recyclable fractions of waste would be much higher.

We therefore fundamentally disagree with the conclusions of the report.

- Conclusion 1: "*Co-incineration contributes to climate change. Cement plants burn plastic and tyres, made of fossil fuels that emit significant amounts of CO2 when incinerated*"

  Our response: as demonstrated above, using non-recyclable waste allow for significant CO2 emissions reduction for the European cement industry. The cement plants do not burn plastics as such. Non-recyclable plastics are part of the RDF together with other industrial and municipal fractions of waste for which the recycling or reuse is not technically and economically feasible.

- Conclusion 2: "*Cement plants burn waste that could have otherwise been either recycled or composted. Municipalities committed to a zero-waste circular economy show that up to 80-90% waste can be separated at source and reused/recycled*"

  Our response: The cement industry only uses waste that is non-recyclable and would otherwise go to landfill.

- Conclusion 3: "*Co-incineration is not a safe way to treat toxic waste. Monitoring and reporting of burning RDF are insufficient, evidence from reported accidents show significant impacts on public health and the environment*"

  Our response: first of all, the cement industry is only handling certain waste streams and some waste types are excluded on the basis of Guidance from the Global Cement and Concrete Association; as explained above, the use and reporting of RDF is very strictly regulated in the European cement industry, both in terms of CO2 emissions and air pollutant emissions.

- Conclusion 4: "*Co-incineration also negatively impacts local communities. Local populations are often bearing the cost without any consultation or compensation*"

  Our response: The negative impact of RDF on health is a claim that has often been made but never been substantiated or proven by solid evidence. This also appears from repeated and consistent responses from the European Commission to questions in the European Parliament which refer to the compliance by the cement industry with applicable EU legislation, more specifically the Industrial Emissions Directive 2010/75/EU (IED) and the implementing Best Available Techniques (BAT) decision for the cement sector that forms the basis for the permitting.