

Dioxins and Waste-to-Energy plants: State of the Art

Historically the Waste-to-Energy (WtE, waste incineration with energy recovery of municipal and similar waste) sector has been associated with dioxins emissions. However, since 1989 European WtE plants are subject to specific legislation to prevent and control pollution, with legal requirements that became stricter and stricter until **reaching the most ambitious environmental legislation in Europe**.

To show some meaningful examples of the results of the WtE sector's considerable effort in reducing its environmental impacts, CEWEP [has gathered extensive data from its members](#) on monitoring of dioxins and furans from the stack and in the surroundings of WtE plants all over Europe. These examples cover only a fraction of all research and data available, but they allow for an in-depth assessment of the current situation regarding these pollutants in and around WtE plants.

The report's main findings are:

1. Assessments and comparisons between **emissions at the stack of WtE plants** and **concentrations measured in the surroundings** have shown that when dioxins are found in the surroundings of a WtE plant there is **no correlation** with the plant's emissions.
2. EU WtE plants are subjected to and comply with one of the **most stringent regulations** in terms of pollution prevention and control. Today, dioxin emissions from WtE account for **less than 0.2% of the total industrial dioxin emissions**.
3. Monitoring of dioxins is associated with both **stringent limits** and **extended periods**, meaning that measurements must be carried out during all operating stages, including start-up and shutdown.
4. Data assessments, comparisons and long-term experience of operators have shown similar emission patterns between periodic measurements and continuous sampling. A well-managed EU WtE plant emits extremely low concentrations of dioxins and furans (sometimes below the limit of detection of the instruments) thanks to its sophisticated combustion control and pollution abatement system. This happens regardless of the specific measuring equipment.

"This report shows a success story of implementation of ambitious environmental legislation. WtE plants are not a relevant source of dioxin emissions anymore (0.2% of the EU industrial emissions), and operators are continuing their considerable efforts in reducing the environmental footprint left by the safe treatment of the waste we cannot recycle." CEWEP's Managing Director Ella Stengler says.

Download the [full report here](#).

CEWEP (Confederation of European Waste-to-Energy Plants) is the umbrella association of the operators of Waste-to-Energy plants across Europe. CEWEP's members are committed to ensuring high environmental standards, achieving low emissions and maintaining state of the art energy production from remaining waste that cannot be recycled in a sustainable way.