



Explanatory Note

CEWEP carried out a report on energy efficiency with regard to the review of the Waste Framework Directive.

The report is based on the R1 formula, which has been proposed by the Commission in Annex II of the draft Waste Framework Directive (delivered on 21st December 2005).

97 Waste-to-Energy (WtE) plants (CEWEP members) have been investigated. In the whole of Europe there are about 420 plants.

Although we assume that the most efficient WtE plants in Europe participated in CEWEP's investigation, only 67 WtE plants achieve the energy efficiency threshold of 0.6 based on the R1 formula, which is proposed by the Commission for existing plants.

An evaluation by the SVDU (France), which was not considered in the CEWEP investigation on energy efficiency, showed recently that from 85 investigated plants in France only 7 WtE plants comply with the efficiency threshold proposed by the Commission.

Therefore, CEWEP is still of the opinion that a threshold of 0.5 would be sufficient and challenging enough for existing WtE plants (with a further reduction of 0.1 for small plants and plants which produce electricity only due to a lack of heat demand, e.g. in Southern European countries).

An energy efficiency threshold of 0.5 instead of 0.6, could be achieved by further 18 WtE plants (i.e. 85 plants) from the 97 plants investigated by CEWEP.

Further remarks:

For heat, the formula does not only take into account the efficiency of the plant to recover heat from waste but also the 'efficiency' of supplying consumers with the recovered heat.

As heat cannot be transported long distances, it is necessary to have the consumer for the heat close to the plant. However, due to a lack of public acceptance, WtE plants have been forced quite often to be constructed away from potential consumers.

We hope that this attitude will change in the future, taking into account that public fears against WtE plants are not justified as these plants operate with minimal emissions. WtE plants should be placed in areas where they can deliver the heat, which they generate to their neighborhood. Once this is achieved, the Commission's requirement for the energy



efficiency threshold is justified, however for **existing** WtE plants the factor 0.5 is challenging enough.

Correction of the formula itself:

For thermodynamic reasons the E_f must be deleted in the counter of the formula as it is included twice, in the counter and in the denominator. However, the input (like the calorific value of the waste E_w has to appear in the denominator only).

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