

The role of Waste-to-energy in the circular economy.

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The aim of the circular economy (CE) is to keep the value of products, materials and resources as long as possible in economy to minimise resource use. According to the EU action plan on CE (2 Dec 2015) major improvements can be made in waste management.

The Waste Framework Directive, WFD, 2008/98/EC gives a waste hierarchy: with prevention on top, followed by preparing for reuse, recycling, recovery, disposal. WtE with high energy efficiency (R1) is to be considered recovery. This is lower in the waste hierarchy than prevention, prepare for reuse and recycling, and WtE does not seem, at first sight, to keep value as long as possible in the economy. Moreover, it can be asked if WtE does not compete with recycling. Therefore, this presentation wants to answer the question 'has WtE still a role to play in CE?'. In my opinion the answer is yes for the following reasons: 1. Only waste is combusted that to date cannot be recycled; 2. WtE is not a competitor of recycling, but rather of landfill (with is lower in hierarchy); 3. WtE is essential to keep hazardous materials out of CE; 4. WtE may produce energy (about 50% renewable and 50% climate neutral) with high efficiency; 5. A large part of the inorganics contained in the bottom ash are recycled; 6. The CE needs a lot of energy, that can (partly) be obtained from WtE.

These aspects will be considered, discussed and illustrated with recent practical examples.