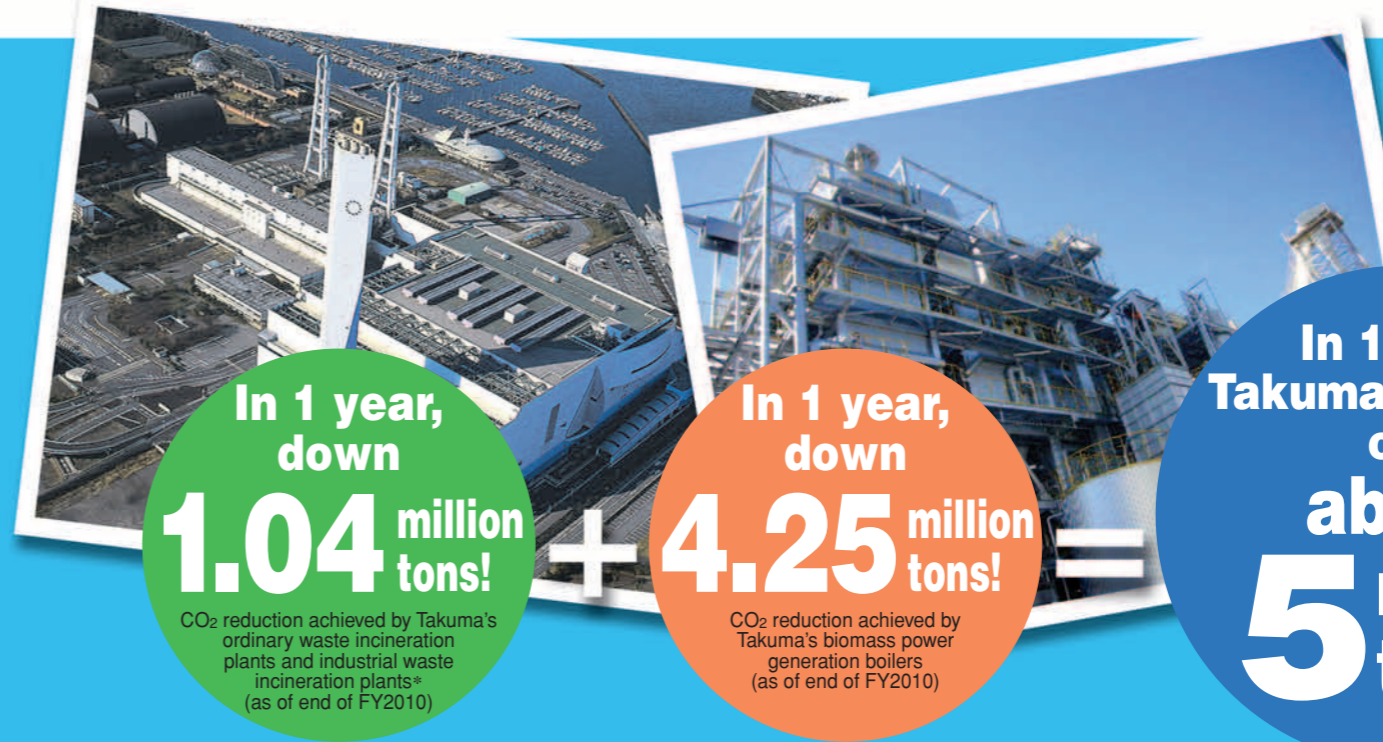


Takuma's CO₂ Reduction Technologies

We convert waste/biomass into energy and reduce CO₂!



In 1 year, down **1.04 million tons!**
CO₂ reduction achieved by Takuma's ordinary waste incineration plants and industrial waste incineration plants* (as of end of FY2010)

In 1 year, down **4.25 million tons!**
CO₂ reduction achieved by Takuma's biomass power generation boilers (as of end of FY2010)

In 1 year, Takuma products cut about **5 million tons!**

* According to "Waste incineration facility ledger fiscal 2006" by the Japan Waste Research Foundation, and Takuma's achievement records

Energy from garbage

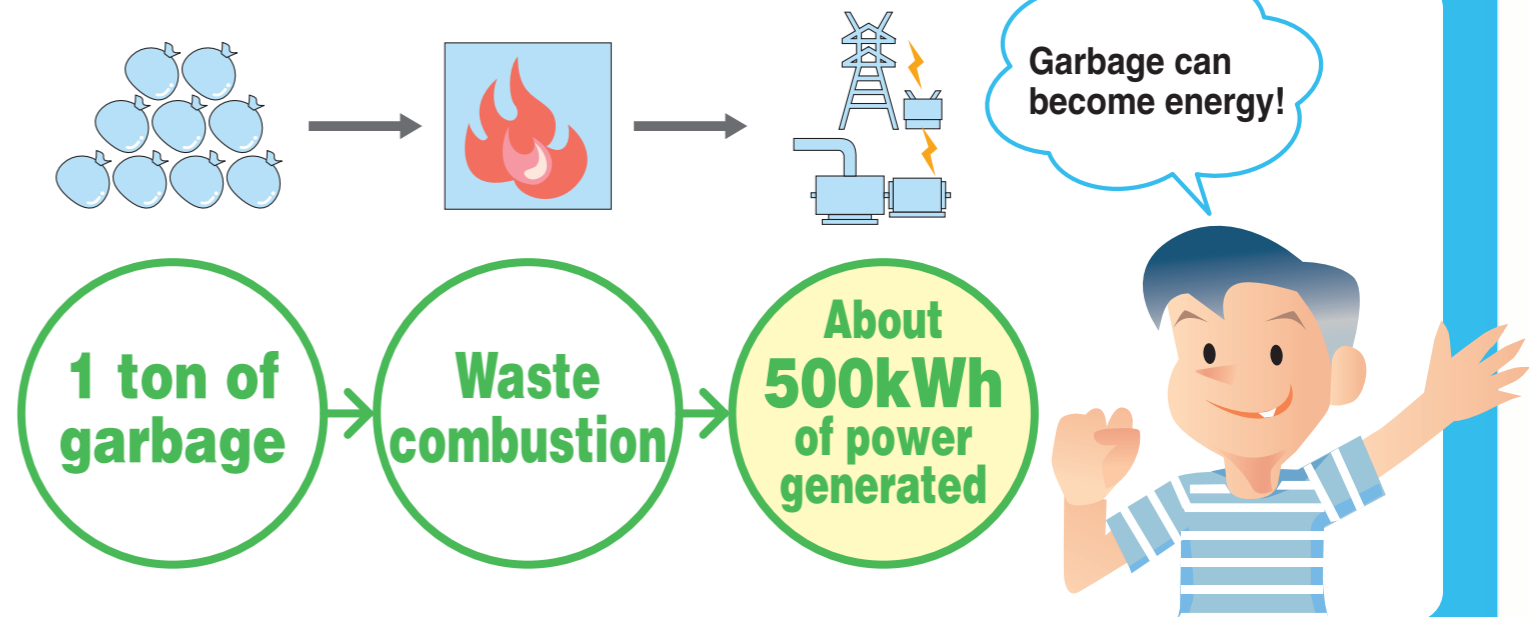
What is biomass?

Biomass is any recyclable organic material derived from a living organism, but does not include fossil fuels. For example, even though CO₂ is emitted if vegetables and other household wastes are incinerated, when vegetables are grown again, they absorb CO₂, so there is no increase in CO₂ in the atmosphere. By using the heat produced by incinerating biomass to generate power, the amount of power generated using fossil fuels as fuels can be reduced, and this contributes to decreasing CO₂.

Reducing CO₂ at Energy from Waste plants and industrial waste incineration plants

Garbage is not really waste. It is an important source of energy. About 500kWh* of power can be generated from one ton of garbage. In Europe and the Americas, waste incineration plants are often called Energy-from-Waste (EfW) plants, and recovering energy from garbage has become the norm. Please stop thinking of garbage as "garbage." It is a "resource." We are seeking to be the best in the world with our technologies to convert waste into energy and reduce CO₂.

* Assumes the waste has a calorific value of 8,800kJ/kg and a power generation efficiency of 20%.



Energy from biomass

Reducing CO₂ with biomass power generation boilers

A classic example of biomass power generation is in sugar refineries. At factories that make sugar, the remnants of the raw materials are produced in large quantities. Sugarcane is crushed minutely, and sugar is extracted in a compressor. The remaining fiber is called bagasse and can be used as boiler fuel. The steam produced can be used to provide electricity necessary at the plant, and then used as a heat source for refining sugar. In recent years, the amount of power generated at sugar refineries has grown greatly. There are even examples of single plants that are stably supplying electric power equivalent to 50MW.

