

CASE WATCH 01 : WASTE FUEL VALORISATION

Transform waste streams with high-calorific value into alternative fuels for process industry.

Reduce primary resources and costs by reusing waste fuels.



RECYCLING OUR WASTE FUELS

KEY INSIGHTS

- value waste streams
- optimise plant operations
- reduce primary fuel use
- reduce CO₂ emissions

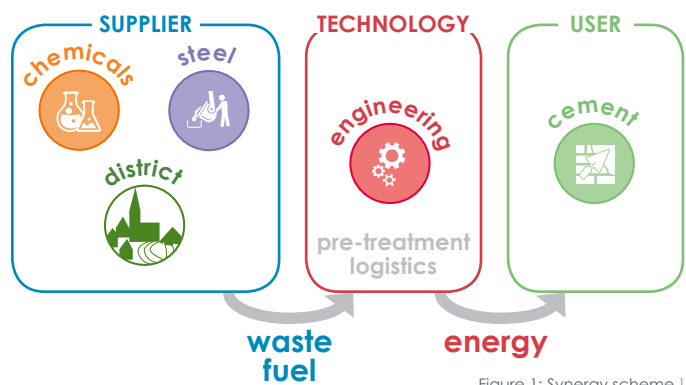


Figure 1: Synergy scheme ¹

CROSS-SECTOR COLLABORATION

Process industries have a high potential to better valorise their waste fuels.

Cement kilns and process industry burners/furnaces often have a top-up demand for high-calorific waste fuels.

- 200-220 KWh of alternative fuel/1000 barrels of oil processed
- 150-200 KWh of alternative fuel/ton steel produced
- 100-200 KWh of alternative fuel produced/person in 1 year
- - - - Minimal calorific value to process fuels in cement kilns (ca. 5 kWh/kg)

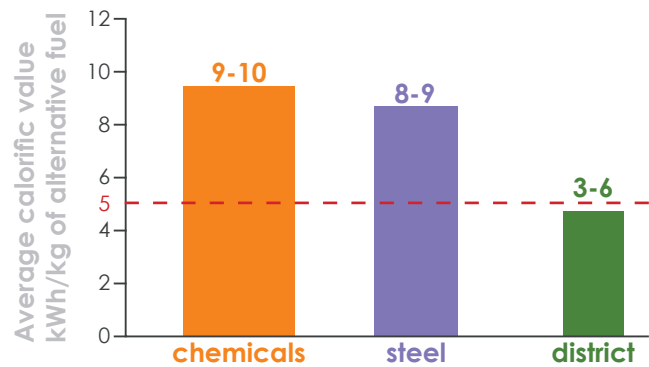


Figure 2: Fuel potential per sector ^{1,2,3,4,5,8}

SUSTAINABILITY IMPACT

Wins for industry

- > for suppliers: 10-15 €/ton waste fuel¹
- > for cement: 10-20% reduction of total OPEX⁶

Environmental gains

- > primary resource savings: 20-22 GJ saved per ton of waste fuel used⁷

Wins for society

- > municipal waste management avoidance¹
- > improved business relations in regional clusters
- > job creation and new skills development



Figure 3: Sustainability ¹

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