

Challenges and perspectives for a sustainable and carbon neutral circular economy in Hamburg – Stadtreinigung Hamburg

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Climate change is one of the greatest challenges facing our society today. As a public company of the city Hamburg, Stadtreinigung Hamburg has taken on a great responsibility for climate protection. As one of the largest public service providers in the field of waste management in Germany the company has set itself the goal of becoming carbon neutral by 2035.

Measures include energy-efficient construction, the expansion of electromobility and fuel cell technology in the vehicle fleet, projects to recover recyclable materials and measures to increase climate-neutral energy generation.

In the field of energy generation, Stadtreinigung Hamburg (municipal cleaning service) supplies carbon-neutral energy in the form of biogas, electricity and heat through the operation of a biogas and composting plant as well as two waste incineration plants. In addition, Stadtreinigung Hamburg is working on a hydrogen strategy, whereby hydrogen is to be produced by operating electrolyzers with electricity from the waste incineration plants, which can be used to refuel the bus fleet of VHH and the vehicle fleet from Stadtreinigung Hamburg.

One important project to increase the recycling rate of residual waste is the construction of the so-called Centre for Resources and Energy (ZRE) in Hamburg. After its completion in 2025, this modern waste treatment plant will include not only two boilers for waste incineration to produce carbon-neutral energy for private households and industry, but also a modern sorting plant for the recovery of around 10.000 Mg/a of valuable materials such as paper, glass, metals and plastics. After a mechanical and/or chemical treatment process, of the separated fractions, these recyclable materials are available as secondary raw materials for production, thus avoiding emissions from the extraction and transport of raw materials. This large-scale project enables a significant reduction in CO₂ emissions and contributes to a functioning circular economy. In its form, it is unique in Germany.