Recycling & Waste Management

In 2013, the German waste management and recycling markets totaled approximately EUR 17 billion, representing 17% of the global market volume. The basis for Germany’s leadership in the global recycling industry is the country’s first mover role in waste management law and a business environment that favors innovation and new technologies.

Latest Publication

Fact Sheet - Environmental Technologies in Germany

A long tradition in environmental technologies aligned to pioneering environmental policy and a supportive legal framework have helped establish Germany as a leading green economy player and home to one of the most advanced environmental technologies markets worldwide.

KA International Special Edition 2018/19 [pdf]

The Fight Against Climate Change as an Opportunity in Germany? Current Developments and Further Needs where Water is in Excess

by Flérida Regueira Cortizo, Annika Förster, Michael Schnabel and Daniela Vaziri (GTAI - Berlin/Germany)

Waste management, recycling, and the circular economy in Germany
Market Development & Legal Framework

Innovations and new technologies are changing the demand for resources worldwide. In Germany, the energy transition, digitization, and a growing awareness among consumers regarding sustainability have increased the potential for innovative international waste management and recycling companies.

The recycling of wind turbine components and carbon fiber composites, rare earth elements, electronics, electric car batteries, packaging, and circular fashion are just some examples of promising new market niches. Between 2008 and 2015, the German circular economy industry grew by 7.3% annually, and it is estimated that it will grow a further 5.2% per year through to 2025 – exceeding expected global market growth of 4.4% p.a. (BMUB/Roland Berger). With a revenue of more than EUR 11 billion (Federal Statistical Office 2017), the recycling industry represents the largest segment of the German waste market.

The provisions of the German Waste Management Act (KrWG) are the backbone of Germany’s leading circular economy market. The KrWG enshrines the notion of product responsibility by defining responsibilities along the product life cycle and offering incentives to manufacture durable products. It was amended in 2012, transposing the EU waste management directive (2008) into German law.

Central to the new act was the introduction of a new five-step waste hierarchy of waste avoidance, re-use, recycling, energy recovery, and disposal. Since 2015, biological waste as well as paper, metal, plastics, and glass must be collected separately (subject to technical and economic feasibility). Other federal and state-level regulations also apply.

German Waste Management Act (KrWG)

Key Regulations

- **Optimizing Waste Management**
  - Objective: minimize waste generation & maximize recycling

- **Clarifying Responsibilities**
  - Definition of responsibilities along the product life cycle & incentives to manufacture durable products

- **Prioritizing the Environment**
  - Introduction of 5-level waste hierarchy giving precedence to the environmentally best option

- **Aiming Higher**
  - Target: reuse or recycle 65% of all municipal waste by 2020 (EU general target: 50%)

Do you offer an innovative solution for waste management, recycling, or the circular economy?

**Contact us** to receive more information about market opportunities for your business in Germany and learn how we can support your expansion.
Selection of Business Opportunities

A selection of business opportunities at a glance: Circular fashion

With an estimated turnover of EUR 63 billion in 2017, Germany is home to one of the largest clothing markets in Europe (Statista 2017). Until 2020, the market is expected to grow by at least 2.4% annually (Statista 2017). But let’s take a look into the more distant future: What will fashion look like in 2050? “Environmentally friendly, resource-saving, and recyclable”, is what the Confederation of the German Textile and Fashion Industry says. However, the development of the market for circular fashion and sustainable textiles suggests that the future is now:

According to the Slow Fashion Monitor 2016, for more than 73% of consumers, sustainability is important or even very important when making a purchasing decision. Among women, 53% are willing to pay more for environmental-friendly, sustainable, and fairtrade clothes (TextilWirtschaft 2016). This offers new opportunities for the development, production, and sale of sustainable textiles and clothing recycling in Germany.

A selection of business opportunities at a glance: Packaging recycling

Demographic changes and new lifestyles, such as the increase of one- or two-person households, an ageing society, a growing tendency to eat out and the rise of mail-order businesses and e-commerce have led to a constant increase in packaging waste in Germany. While in 1991, packaging waste totalled 15.6 million tons and even decreased for some time after that, it then peaked in 2015 at 18.2 million tons (Federal Environment Agency 2016). Of this, only 69.3% was recycled (Federal Environment Agency 2016). The recently introduced German Packaging Act demands higher recycling quotas for packaging in order to close the gap, thus enhancing the need for new and improved plastic recycling technologies.

The need to improve recycling quotas is especially great for plastics, which represent 16.8% of all packaging waste in Germany (Federal Environment Agency 2016). The ban on plastics waste imports to China has increased the need for more and improved recycling of plastics within Germany.

Recovery rates for packaging waste in Germany

<table>
<thead>
<tr>
<th>Material</th>
<th>Current recovery rate</th>
<th>Minimum recovery rate as of 2019</th>
<th>Minimum recovery rate as of 2022</th>
</tr>
</thead>
<tbody>
<tr>
<td>Plastic packaging</td>
<td>36%</td>
<td>58%</td>
<td>63%</td>
</tr>
<tr>
<td>Aluminium</td>
<td>60%</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td>Tinplate and ferrous metals</td>
<td>70%</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td>Paper and cardboard</td>
<td>70%</td>
<td>85%</td>
<td>90%</td>
</tr>
<tr>
<td>Glass</td>
<td>75%</td>
<td>80%</td>
<td>90%</td>
</tr>
<tr>
<td>Beverage carton</td>
<td>60%</td>
<td>75%</td>
<td>80%</td>
</tr>
</tbody>
</table>

Source: Deutscher Bundestag, Drucksache 18/11274 & BMUB
A selection of business opportunities at a glance: Recycling of construction materials

In 2015, more than 409 million metric tons of waste was generated in Germany, with a recycling rate of only 68%. With 209 million metric tons of waste every year, building and construction materials represent the lion’s share of waste, therefore making it one of the most attractive markets for recycling technologies in Germany.

Within German buildings, 220 million tons of wood, 10.5 billion tons of mineral construction material, and 100 million tons of metal (estimation, Gabriel 2010) are waiting to be extracted and represent a huge potential for reuse and recycling. Innovative solutions and new technologies are therefore needed to meet the pressing demand for construction material recycling in Germany.

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