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Making Products, Minimizing Footprints

Sustainable Industry

The industrial sector is responsible for 23% of the United States' greenhouse gas emissions, primarily from carbon-based fuels used for energy production. Decarbonization requires shifting to energy efficiency, industrial electrification, clean energy, and advancing carbon capture technologies.

Sweden is tackling industrial challenges by emphasizing efficient resource utilization, innovating new materials, pioneering renewable energy for industrial heating and waste heat recovery, and adopting circular economy practices throughout the value chain.





Sweden's Strong Commitment to Sustainable Industry

One common misperception regarding reducing emissions and investing in more sustainable solutions is that it will harm economic growth. Sweden has shown the opposite. As one of the world's first countries to introduce a carbon tax (in 1991), the Sweden economy grew by 78% between 1991 and 2018 while reducing emissions by 26%. Swedish industry is at the forefront of green transition, fueled by the widespread use of renewable energy sources. Collaborative partnerships are essential, exemplified by road maps for fossil-free competitiveness developed by 22 industries.

Decarbonizing the Energy Supply

Sweden has an almost carbon-free electricity mix as a foundation for the decarbonization of industry. Renewable energy, such as biomass, is frequently used in industrial heating. Waste heat recovery solutions from Alfa Laval, Atlas Copco, Helios Innovation, and Againty enhance efficiency and lower carbon emissions. Elpanneteknik excels in electric boilers, while Liquid Wind and Powercell Group drive hydrogen development.

Powering the Future with Connectivity in Factories and Beyond

ABB, Ericsson, and SKF are at the forefront of automation, connectivity, and electrification, which are part of decarbonizing industry and society. SKF's bearings improve efficiency due to less friction, and Ericsson plays a significant role in 5G and AI.

A New Era of Materials – From Trees, Sludge and Circular Practices

Swedish innovators Hybrit, H2 Green Steel, and GreenIron H2 are transforming the steel industry, developing fossil-free steel using green hydrogen. With a heritage of sustainable forestry, bio-economy companies such as Stora Enso, Södra, Billerud, Akzo Nobel, Perstorp, Holmen, and SEKAB offer renewable feedstock for sustainable materials.

New materials can also be found in waste. Easy Mining turns sewage sludge ash into phosphorus products, and HaloSep transforms hazardous waste into usable materials. Furthermore, Swedish companies and researchers are at the forefront of developing biodegradable and compostable packaging materials, such as bio-based plastics and materials derived from agricultural byproducts.

With a well-established waste management and recycling infrastructure, valuable resources can be kept in the loop. The world's largest and most modern sorting facility for plastic recycling, Site Zero, is under construction. Carbon capture and storage solutions will be essential for further decarbonization alongside new circular business models as we advance.

Data Tracking to Know Your Impact

Companies need to know their footprint for responsible business operations, covering their own and upstream/downstream supply chains. Swedish companies Position Green, Worldfavor, and Normative offer solutions to track supply chain footprint. Ecogain is committed to keeping track of the effects on biodiversity.

The Rise of Green Distribution

Leveraging technology and data analytics for intelligent logistics, optimizing routes, and reducing fuel consumption are vital to minimizing the environmental footprint of transportation networks. Sweden is prioritizing the electrification of the transportation sector, including developing alternative renewable fuels.

