

Executive summary

With the decision by the Hamburg Chamber of Commerce (HCC) to reach climate neutrality by 2040, Hamburg's business community has decided to tackle the climate challenge head-on, not least because future-proofing business plans and investments that are consistent with climate neutrality will help seize opportunities and save substantial costs. This report shows what reaching climate neutrality means for Hamburg businesses and identifies key actions they need to undertake.

Operationalising climate neutrality for Hamburg businesses

Reaching the 2040 climate neutrality target will require reaching net zero for direct (Scope 1) and indirect (Scope 2) emissions by Hamburg businesses from the use of electricity and heat in Hamburg. Whilst indirect emissions arising throughout value chains (Scope 3) could reach net zero later, following science-based emission reduction scenarios consistent with the Paris Agreement, businesses will also need to take them into account to become consistent with climate neutrality.

Accounting for almost 50% of Hamburg's economic activity, Hamburg's small and medium-sized enterprises (SMEs) are also important contributors to Hamburg's greenhouse gas emissions. However, especially compared to larger firms, they often lack the resources to make and indeed, master, the transformations climate neutrality requires. Financing stands out as a key obstacle in the path of SMEs towards decarbonisation. Networks can play a crucial role in overcoming this barrier, for example in connecting SMEs with specialised investors. Disclosing net-zero targets, action plans and progress reports can also help businesses demonstrate they are on track and help secure access to green financing and financing from banks interested in delivering on their own net-zero targets, whilst also increasing the potential to integrate into value chains of larger enterprises. Leveraging business networks to pool resources and indeed, improve access to needed knowledge and technology for climate-neutral business models, are also important and cost-saving tools.

Businesses must ramp up investment in energy efficiency now

In commercial buildings, heat pumps are likely to become the main source of heat where district heating is not available. Indeed, with the lifespan of fossil fuel boilers typically lasting around 20-30 years, investments in new fossil fuel boilers are inconsistent with Hamburg's 2040 climate neutrality target or risk being cut short. At the same time, businesses also need to decarbonise buildings more generally and improve energy efficiency. Acting now to meet the 2040 targets, and anticipating tighter regulations, will allow businesses to avoid 'bunching' of demand for construction activity that will be needed, which risks aggravating skills shortages and raising costs. Accelerating the pipelines of skilled workers, notably in relation to the installation of photovoltaic panels, heat pumps and energy efficiency renovation, can also help address supply bottlenecks. Support programmes will need to make sure all businesses, in particular SMEs, are able to adapt to and meet new regulations, and new regulations need also to be sensitive to potentially onerous reporting burdens on SMEs, including those that may be fully compliant in practice.

Low-cost renewable energy, notably solar and wind power, presents an opportunity for businesses to reduce their energy costs. To increase the share of renewables in their energy mix, businesses need to adjust their electricity demand to the time profile of renewables whilst electrifying the bulk of their energy use. Businesses should invest in smart energy storage systems and tools to manage electricity demand working together to share related infrastructure. They should advocate flexible pricing over time and space. Even without such pricing, ramping up rooftop photovoltaic systems, enabling self-production and consumption of energy, is already profitable in Hamburg.

Decarbonising activity around Hamburg's port offers opportunities beyond the local economy

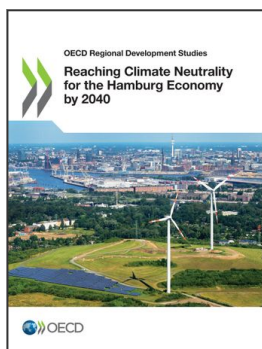
Hamburg's port has already taken a leading role by electrifying port operations and developing zero-emission fuel infrastructure for ships. Hamburg can position itself as a climate-neutral transport hub by 2040 helping businesses throughout western and central Europe. Hamburg stands out for the large share of rail in freight from and to the port. This gives Hamburg a competitive advantage in delivering zero-emission long-haul freight quickly and at a low cost. For remaining trips, electric trucks are moving fast to cost parity with diesel, requiring a rapid ramp-up of investment in such trucks and major charging infrastructure.

As a key European industrial port, Hamburg could become a significant hydrogen hub serving its own high local needs as well as those of neighbouring regions. Scaling up infrastructure to transport, store and process hydrogen can reduce costs. Hamburg has taken important steps in this direction. Green ammonia, produced from green hydrogen, may also play a major role in providing a cost-effective zero-emission fuel mix, and thereby avoid rising transport costs in the long-term, including for trade flows through the Hamburg port. This requires switching investment in ships and infrastructure accordingly in the near term.

The Hamburg port also hosts major basic metals and oil refining industries. Investment in industrial production assets needs to be net-zero consistent starting in 2025 to avoid stranded assets. Energy-saving equipment, access to competitive electricity and hydrogen are key for that. Also, new digital technologies, such as low-cost sensors or real-time tracking of materials composition, can support the needed transformations towards circular economy practices. The resulting reduction in raw material input is essential to climate-neutral value chains. The port's location can offer opportunities for business models for used materials' trade and transformation.

The circular economy as a driver for climate neutrality

A number of Hamburg-based companies have adopted circular business models based on product recycling and reuse, and offer maintenance, repair and refurbishment services. However, circular models remain marginal. Several obstacles hinder effective implementation: businesses are not sufficiently aware of the benefits of the circular economy and lack financial incentives, while regulation is not yet conducive to circular innovations. The HCC could raise awareness of circular business principles and promote circular business models to make production and consumption practices climate-neutral. Capacity building, including training programmes for the business community, could open sustainable business opportunities. The HCC could collaborate with the city to support market innovation through the creation of incubators, hubs and spaces for experimentation.



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