



Corporate Responsibility at MAN in 2018

Products

Production

Supply chain

People

Society
and integrity

Climate and energy

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Efficient transportation and logistics

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Environmental and resource conservation

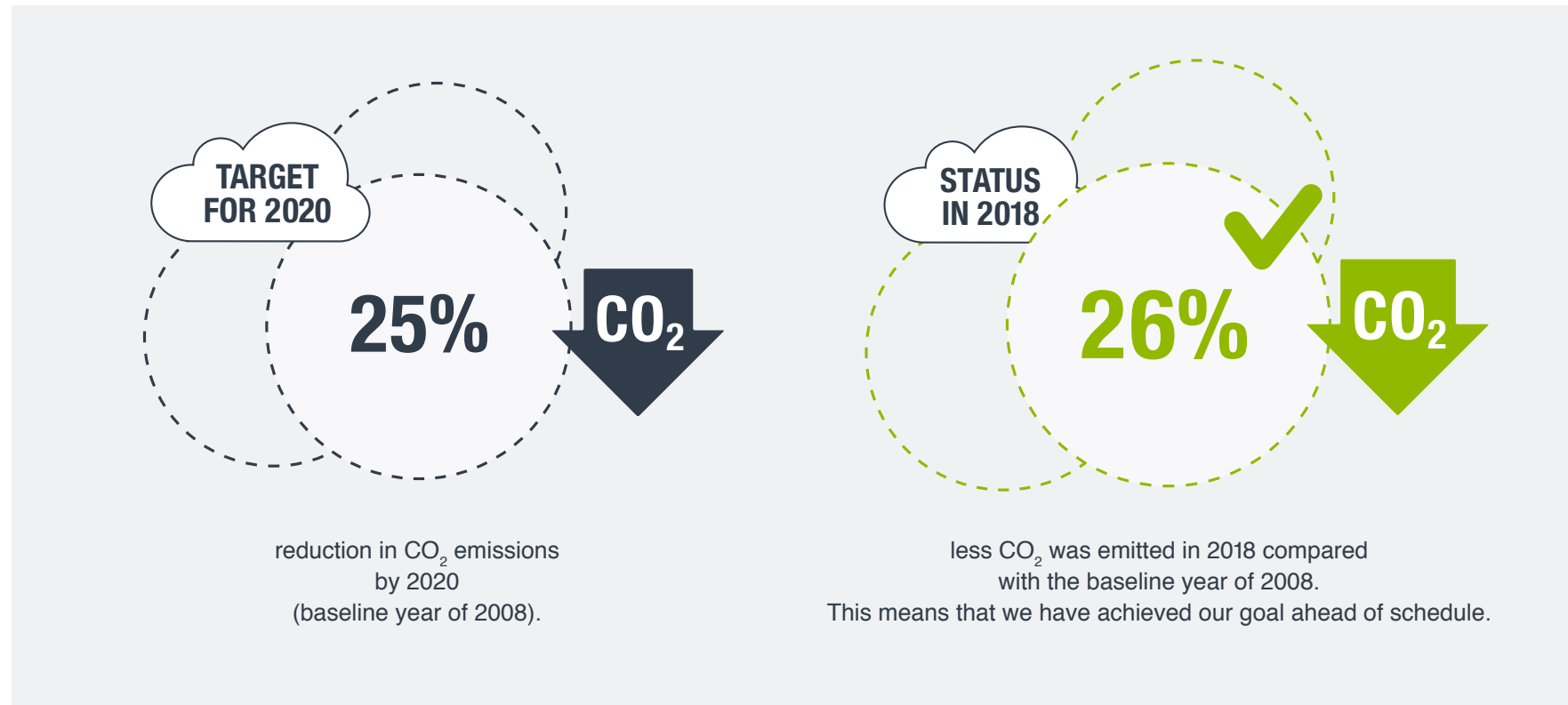
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Responsibility in production

Climate change, pollution, and resource scarcity are relevant global challenges facing the production sector. State-of-the-art technology and our integrated management systems are helping us to reduce the environmental impact of our production activities. We use various levers to lower CO₂ emissions and help mitigate climate change.

A holistic response to challenges

In order to cut our CO₂ emissions throughout the Group, we drew up MAN's Climate Strategy in 2011, which included the binding goal of reducing absolute CO₂ emissions from our production plants by 2020.



Systematically reducing CO₂ emissions

When it comes to reducing energy consumption and CO₂ emissions, MAN pursues a whole range of different avenues. We were able to reduce our production-related CO₂ emissions by 26.0% compared with the baseline year of 2008, which equates to around 141,374 tons. We achieved this thanks to a variety of measures: for example, combined heat and power plants at several production sites, a large-scale photovoltaic system in South Africa, new lighting concepts, and energy-saving air conditioning systems using well water. Looking ahead to 2025 and 2030, MAN is currently working on new objectives to further reduce CO₂ emissions at its sites.

Our systematic approach to cutting CO₂ (E⁴)

Energy efficiency

E¹

- Efficient buildings
- Air conditioning
- Highly efficient illumination
- Efficient pumps and compressed air
- Heat recovery
- Innovative pneumatic drives



Energy renewable

E²

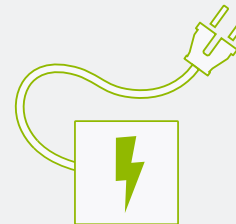
- Renewable energy sources
- Wind turbines
- Solar energy (thermal, electricity)
- Geothermal energy
- Biomass



Energy production

E³

- Cogeneration heat and power units (MAN Engine)
- Micro gas turbines
- Heat pumps



Energy management

E⁴

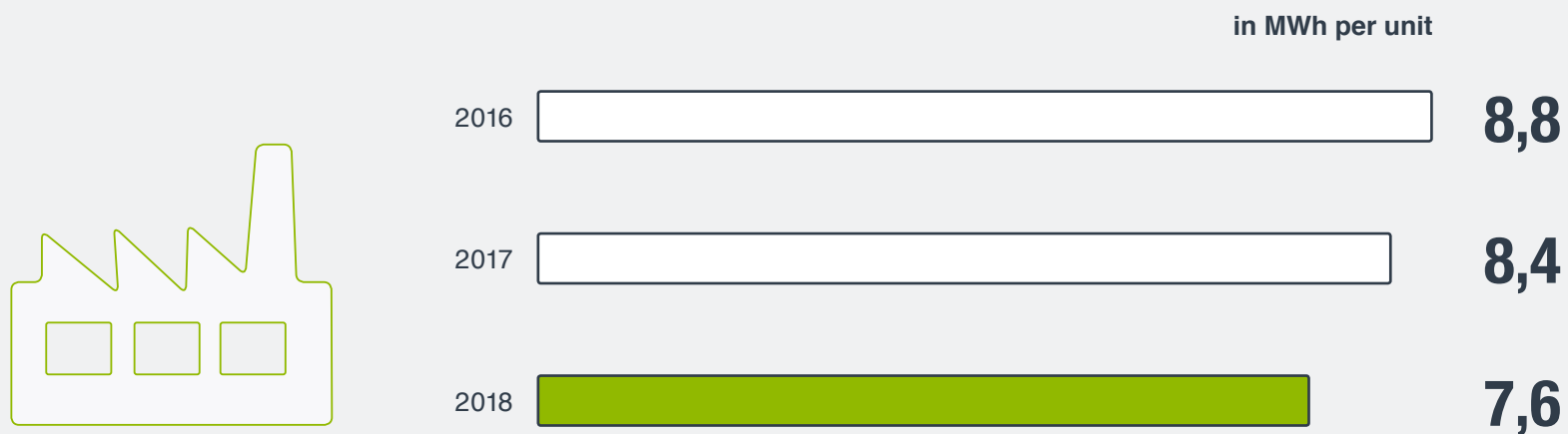
- Data collection of consumption, controlling
- DIN 50001 EnMS certification
- Involvement of Controlling and Purchasing
- Energy audits



Focus on energy consumption

In 2018, energy consumption at MAN production sites increased to 1.41 million megawatt-hours (MWh) (2017: 1.38 million MWh). In the Commercial Vehicles business area, energy consumption per vehicle produced fell from 8.4 MWh in 2017 to 7.6 MWh per unit in 2018.

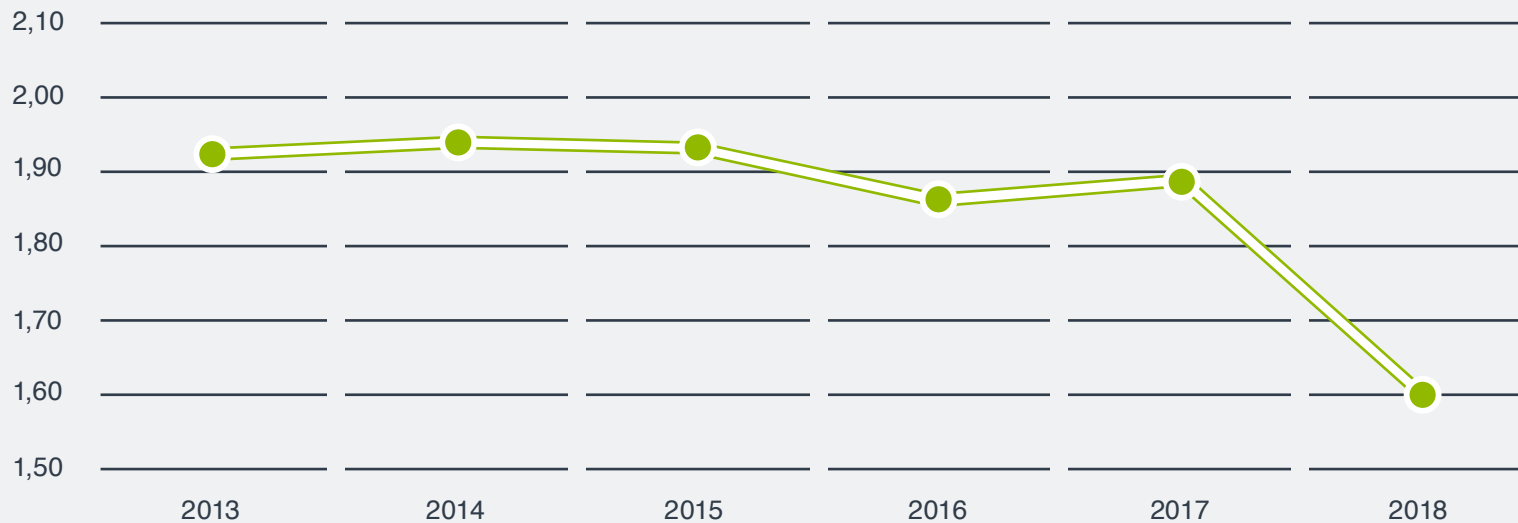
Energy consumption per vehicle produced



Making logistics more efficient

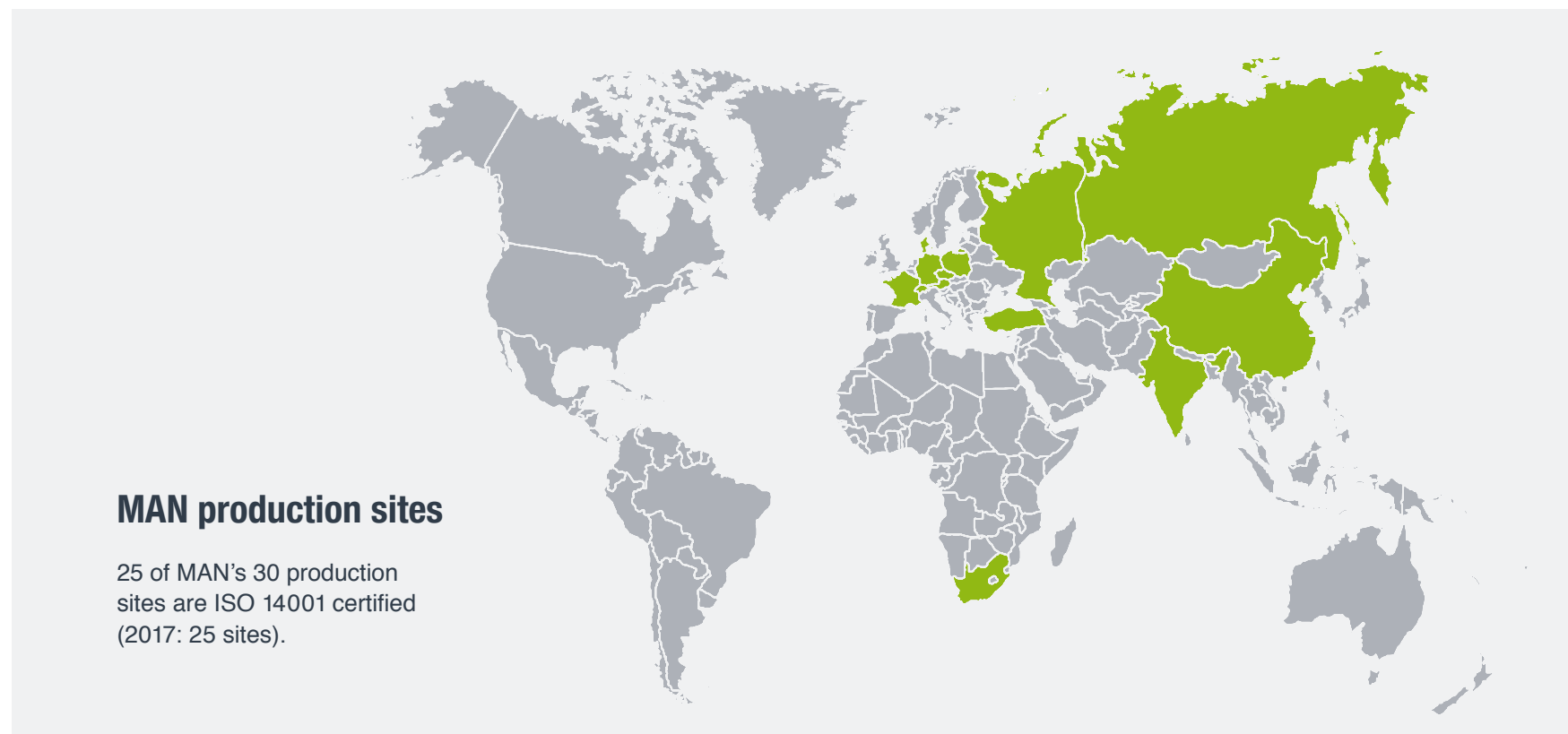
In the year under review, in the logistics sector MAN Truck & Bus caused the release of 69,473 tons of CO₂ (2017: 82,189) for incoming supplies and 104,535 tons of CO₂ (2017: 96,297) in delivering its products. This equates to an absolute reduction of around 2.6% compared to 2017 due to higher production volumes and an extended production range, as well as the use of an updated calculation system. CO₂ emissions per vehicle produced were cut by 14% thanks to a range of optimization measures in logistics. In 2018, these emissions totaled approximately 1.6 tons of CO₂ per vehicle.

Logistics-related CO₂ emissions per vehicle produced, in tons



Systematic management of environmental protection

All MAN production sites have taken the necessary organizational and technical measures to ensure compliance with environmental standards. Our production sites are certified to a quality standard (the majority to ISO 9001). We have set ourselves the target of certifying these sites to the ISO 14001 environmental management standard as well.



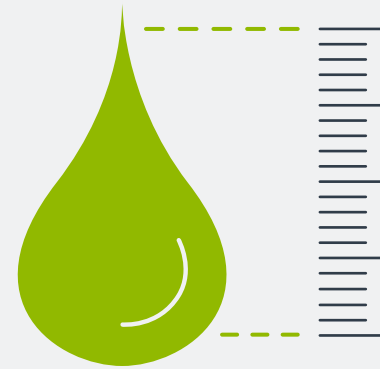
Using resources sparingly

In order to manage our consumption of resources responsibly and to keep it as low as possible, we systematically record our consumption at our production sites on an ongoing basis.



91%

Recycling ratio of total waste in 2018
(2017: 92%)



1,259,465 m³

Wastewater volume in 2018
(2017: 1,268,790 m³)