

Environmental Performance 2019

Shaping the world with sensor solutions

Marlies Radl

04-2020



Environment Management

Annual Environmental Performance Statistics



- ams is committed to responsible, visionary environmental management with the aim to contribute to the conservation of an environment worth living in
- ams fully assesses the environmental impact of our business activities and operates in a manner that avoids or minimizes emissions of pollutants and reduces energy consumption
- ams recognizes that human activities are contributing to global climate change therefore we will pursue activities to lessen our company's impact on CO₂ production

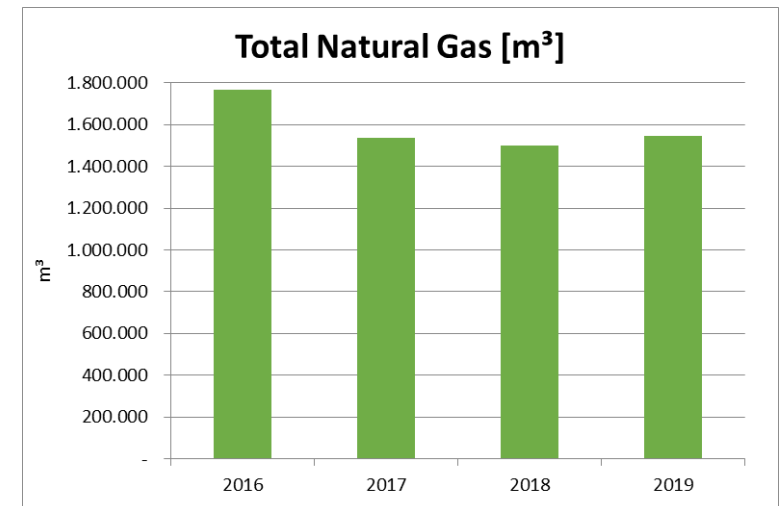
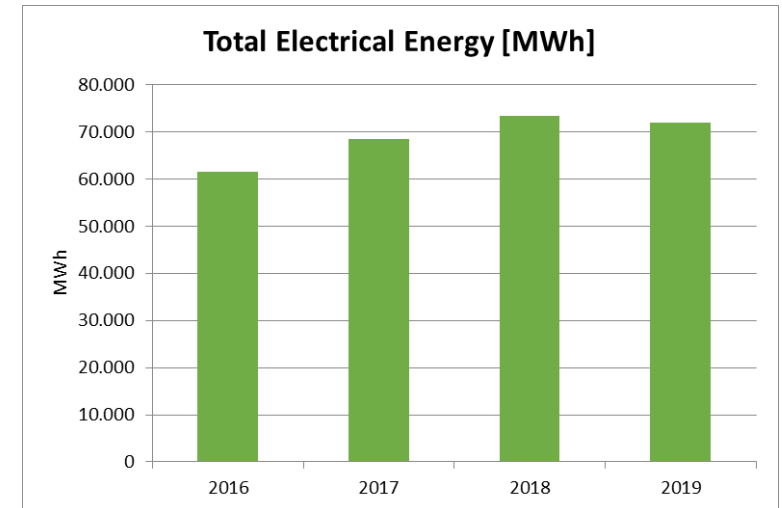
The scope of the report in hand is focusing the assessment of environmental impact of the manufacturing site in Premstaetten, Austria.

Environmental Performance, Austria

Electrical Energy, Natural Gas in 2019

- **71.863 MWh electrical energy** – decrease by 2%.
- The total energy is encompassing the energy needed for administration and offices, the energy required for manufacturing of CMOS and TSV wafer, plus the manufacturing operation in the filter line. In addition the heat pump (consuming electrical energy), which utilizes heat load of equipment to produce warm water, is running in full operation.
- 100% usage of renewable electricity, hydropower since 2011.

- **1.545.724 m³ natural gas** - increase by 3,1%. Almost stable with minor fluctuations that are depending on weather conditions.

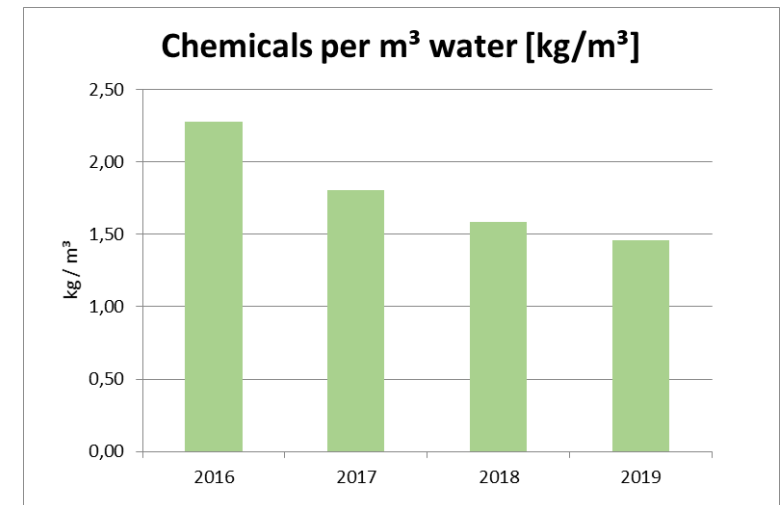
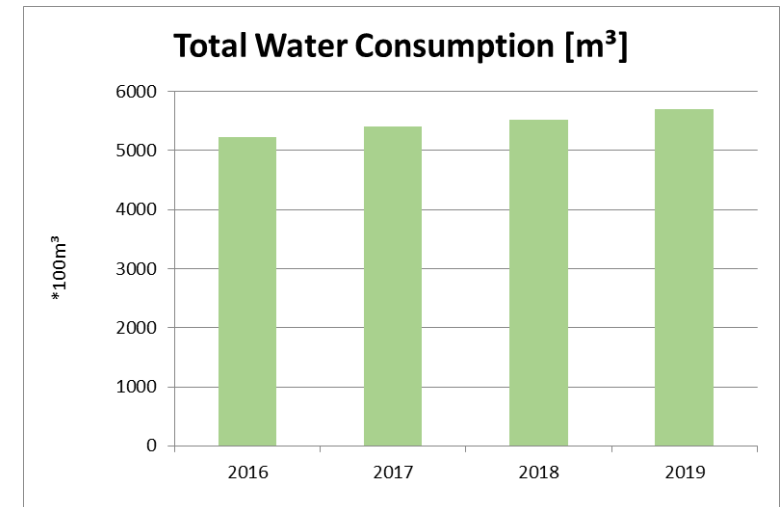


Environmental Performance, Austria

Water, Industrial Grade Chemicals in 2019

- **569.500 m³ water** – increase by 3%.
- Water is used for production of ultrapure water, softened cooling water, and as boiler feed water.

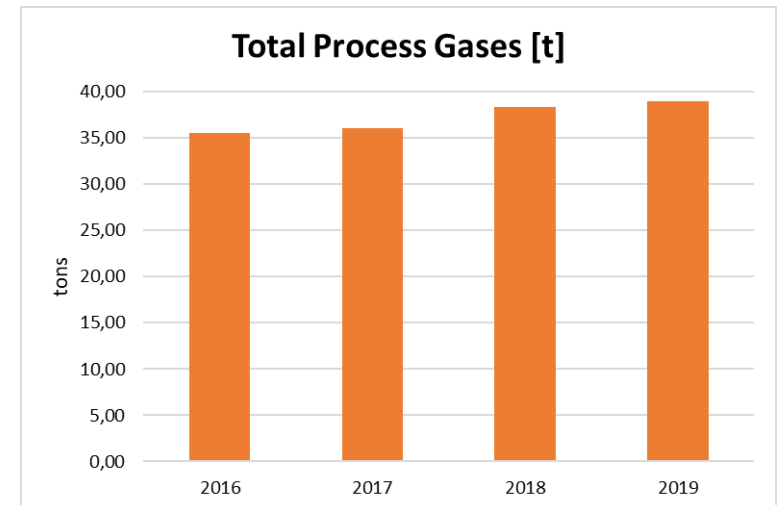
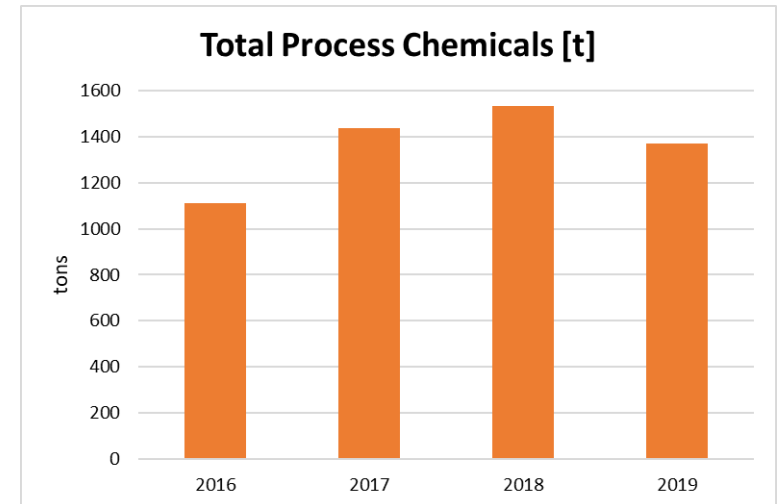
- **1,46 kg/m³ industrial grade chemicals for water** on average – decrease by 7,8% due to water treatment with RO and the usage of waste KOH for waste water neutralization.
- Chemicals for preparation of ultrapure water, for wastewater treatment and exhaust air purification.



Environmental Performance, Austria

Process Chemicals, Process Gases in 2019

- **1.369 tons process chemicals** – decrease by 10,6% due to process optimization and solvent recycling which results in reduced consumption of solvents.
- **39 tons process gases** – increase by 1,6%.
- All gases which are consumed for the manufacturing of wafers are considered.

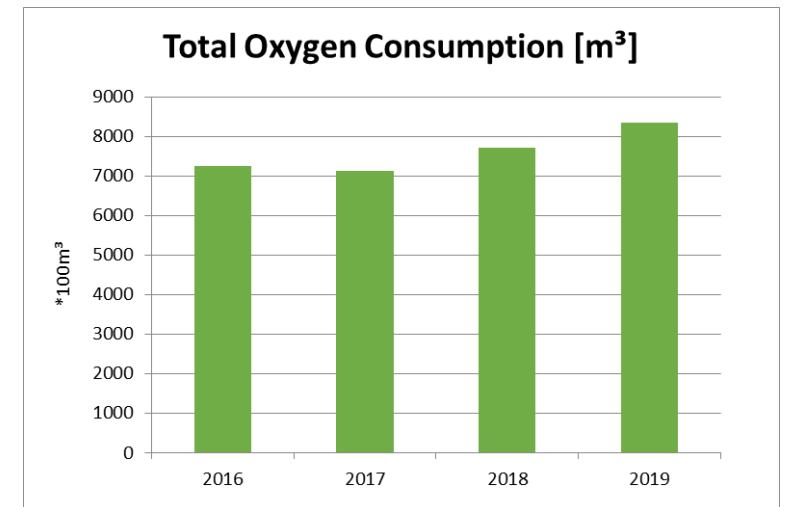
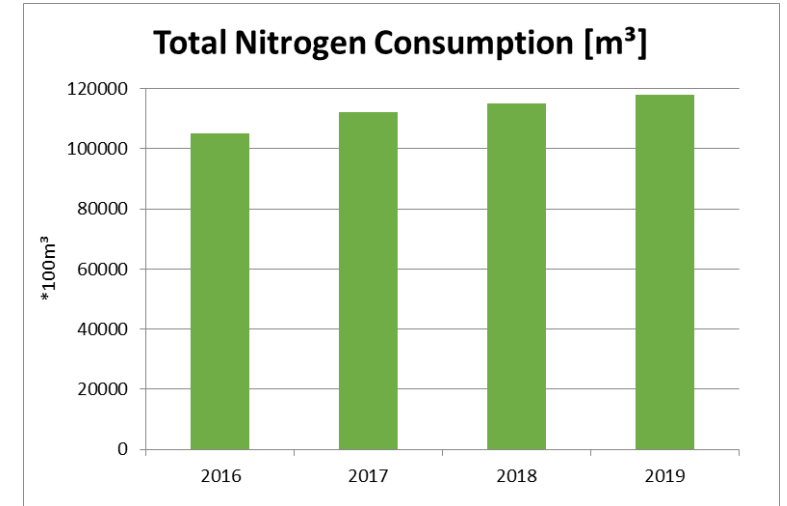


Environmental Performance, Austria

Nitrogen, Oxygen Consumption in 2019

- **11.813.800 m³ nitrogen**– increase by 2,6%.
- Liquid Nitrogen is not only used for production equipment, but also used for maintaining storage conditions.

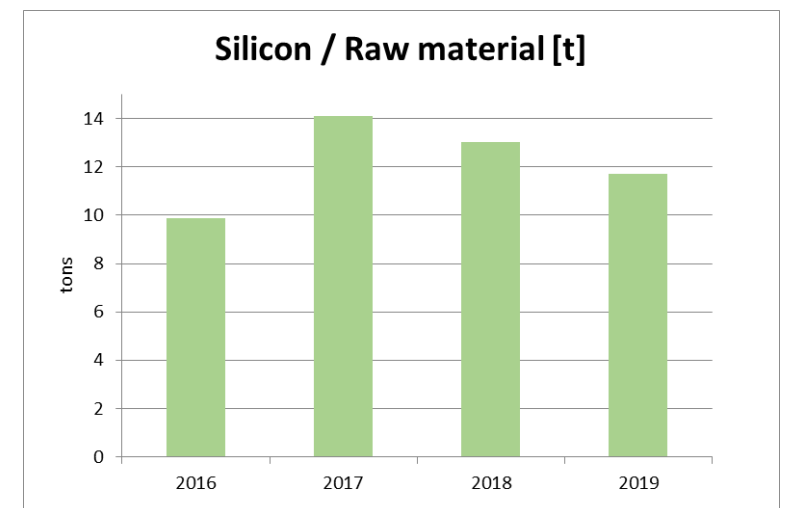
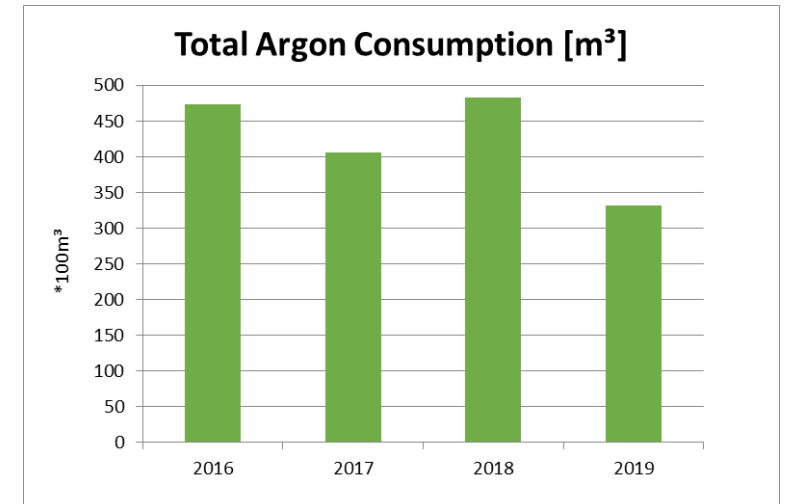
- **834.400 m³ oxygen** - increase by 8,1%.



Environmental Performance, Austria

Argon, Silicon Consumption in 2019

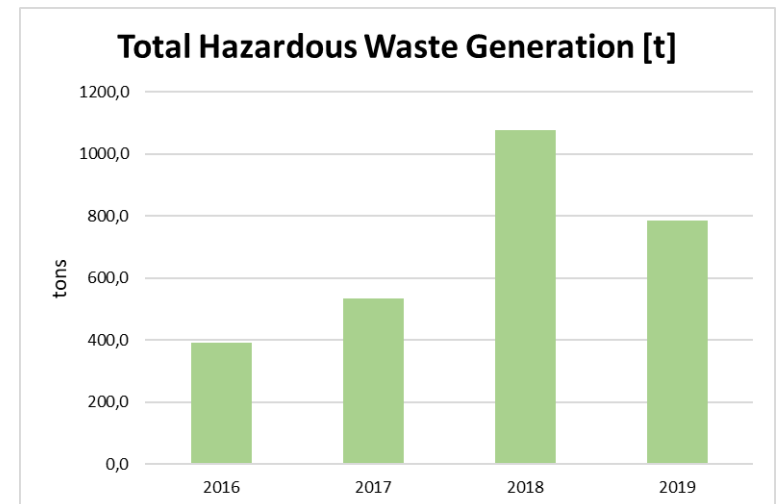
- **33.100 m³ argon** – decrease by 31,4% due to the transfer of filter production capacity to another site.
- **11.7 t silicon** of raw material consumed – decrease by 10%, as reflected from production volume.
- Partially, the consumed silicon is from purchased consigned material – already processed wafers from outsourced foundries are purchased, and continued to be processed in ams fabs.



Environmental Performance, Austria

Non-hazardous Waste, Hazardous Waste in 2019

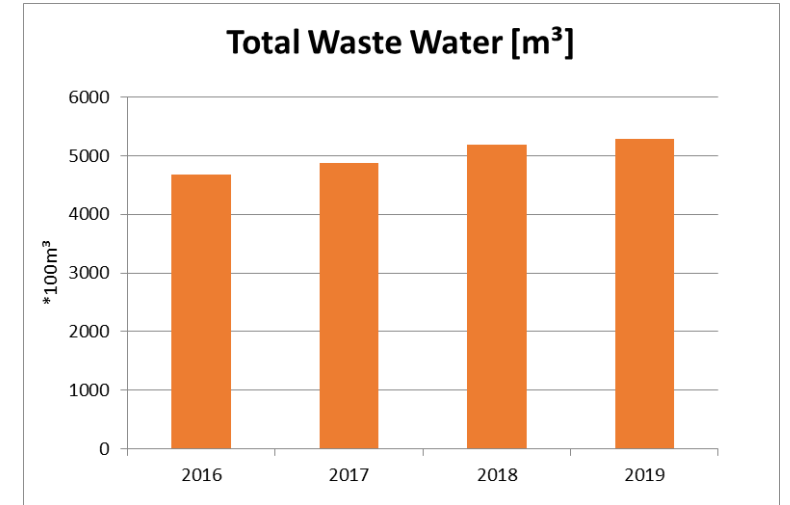
- **278 tons non-hazardous waste** was generated – decrease by 28,3% due to reduced construction activities at the premises and reduced investment activities (details in the waste management statistics).
- **785,5 tons hazardous waste** is generated – decrease by 27% due to process optimization and solvent recycling which results in reduced consumption of solvents.



Environmental Performance, Austria

Waste Water in 2019

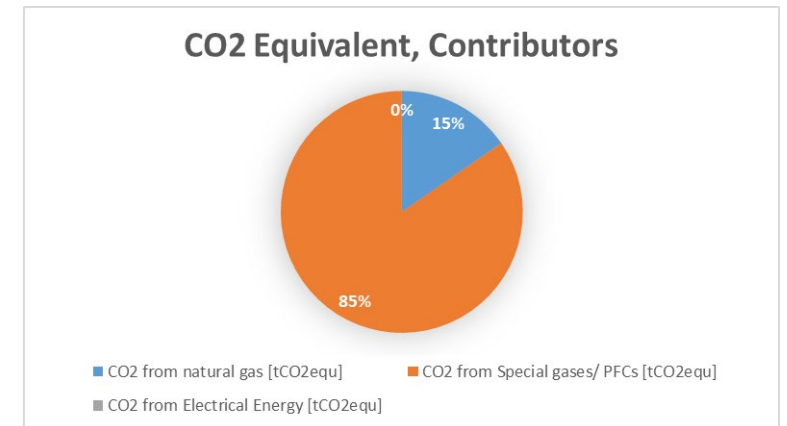
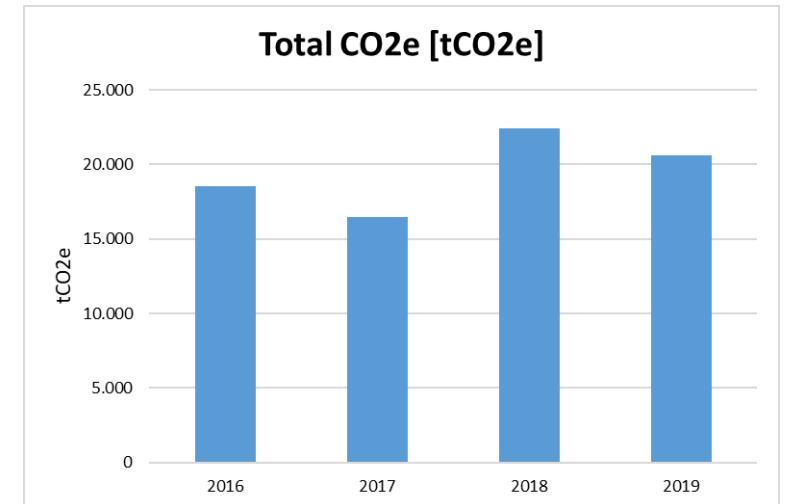
- **529.000 m³ waste water** is generated – increase by 2%.



Environmental Performance, Austria

Greenhouse Gas Emissions in 2019

- **20.611 tCO₂e** are generated for the site in Austria – total decrease by 8%. Caused by the use of special gases in the production area that are identified as GHG potential. Additional amendment capacities installed.
- The CO₂ calculation is considering the usage of special (production) gases (PFCs, HFCs, SF₆, etc) and natural gas.
- 100% usage of renewable electricity, hydropower since 2011 – therefore no CO₂e caused.





Thank you!

Please visit our website
www.ams.com