

Environment

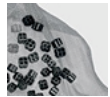
Johnson Matthey has an impact on the environment in many ways: through the resources we use, the way we operate our processes and the action of our products and services on enhancing the environment for others.

We take raw materials and apply our knowledge and expertise to turn them into more valuable products. The costs of these raw materials are likely to increase in future as they are depleted or become harder to access. By increasing the efficiency with which we use these valuable resources, we will generate cost savings for our business today and help to conserve resources for the future.

The recycling and reuse of precious metals are a fundamental element of what we do. We shall continue to draw on our expertise in this area to benefit the resource efficiency of our own operations and provide enhanced solutions and services for our customers.

Environmental targets are a key part of our Sustainability 2017 Vision. The group aims to become carbon neutral, achieve zero waste to landfill and to halve the key resources per unit output consumed by 2017. In order to meet these aspirations, long term environmental improvement plans and performance indicators have now been established.

Read about our environmental policy and management system.



CASE STUDY

Standard for Success – Noble Metals gets Sustainable



Biodiversity

By the nature of our business activities, Johnson Matthey has very little negative impact on the biodiversity of terrestrial, freshwater and marine environments. We do not have any manufacturing facilities located in areas of significant eco-importance. As part of all significant investments and acquisitions, we complete a detailed environmental impact assessment. In addition, all our manufacturing sites that have an ISO 14001 compliant management system undertake an environmental impacts assessment that formally identifies how their operations may have an effect upon local biodiversity. Over the years, we have managed a number of projects looking at improving the areas of biodiversity at our operating sites.

Our Performance

Johnson Matthey undertakes a comprehensive annual review of group environmental performance which covers all manufacturing and research and development facilities. Data is presented for a five year period for our total energy use and emissions of greenhouse gases, acid gases, oxides of nitrogen (NO_x), sulphur dioxide (SO₂) and volatile organic compounds (VOCs). We also report on the amount of waste we produce, waste to landfill, packaging waste, water use and our emissions to water.


Environmental performance data is presented from 1st April to 31st March (unless otherwise stated). Where necessary data has been restated, for example to reflect changes in the business (e.g. divestments and site closure), to take account of changes in best practice methodologies for calculating emissions or in response to recommendations made by our assurance provider.

2009/10 saw steady progress with reductions in energy use, global warming potential, NO_x and VOC emissions, water use, emissions to water and waste produced, despite the inclusion of data this year from three major new manufacturing facilities. Manufacturing sites across the group continued to make progress against their individual environmental improvement targets in 2009/10 which has had a positive impact on overall group performance. Further progress has been made in the implementation of ISO 14001, in line with our target of achieving registration at all major manufacturing sites in 2010. By the end of March 2010, 41 sites (91%) had achieved ISO 14001 registration representing around 93% of the group's manufacturing workforce. The remaining four manufacturing sites have plans in place to achieve registration during 2010/11. There were no significant fines and no non-monetary sanctions for non-compliance with environmental laws and regulations in the year.

Energy Consumption

The group's total energy consumption decreased by 4% in absolute terms to 3,898 GJ ('000) and by 9% relative to sales excluding precious metals compared with the prior year. Of the energy consumed in 2009/10, 63% arose from direct sources i.e. various fuels and natural gas combusted by the group and 37% from consumed electricity generated by a supplier. The global energy bill for 2009/10 was £45.5 million, an increase of £0.1 million compared with 2008/09.





CASE STUDY
Energy Efficiency and Heat Recovery at Taloja, India



0.2%
 reduction in GWP
 in 2009/10

8%
 reduction in waste to
 landfill in 2009/10

10%
 reduction in water
 use in 2009/10

91%
 of major manufacturing
 sites with ISO 14001

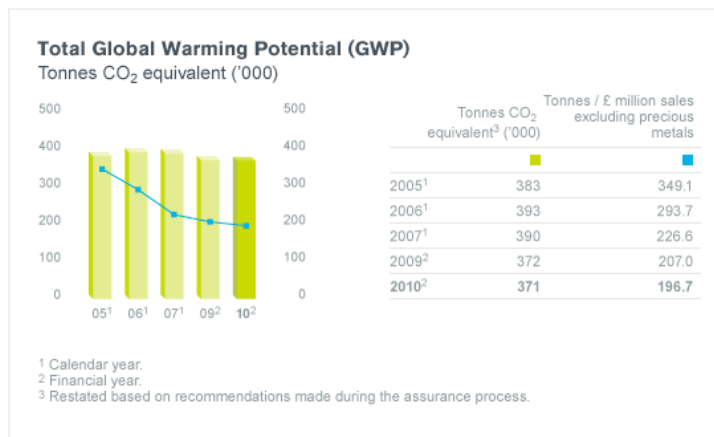


Our Performance

Global Warming Potential

We report greenhouse gas emissions from process and energy use and convert the total group energy use to tonnes of carbon dioxide (CO₂) equivalent using national and regional conversion factors for each emissions source as appropriate.

Data relating to the group's global warming potential (GWP) has been recalculated to include country or regional electricity usage factors based upon the local published carbon intensity of electricity. This yields a more accurate reflection of Johnson Matthey's GWP from this energy source. For our North American operations, US and Canadian regional carbon intensity values have been used. For all other global operations, national conversion factors have been used. In 2009/10 the group's GWP decreased by 0.2% to 371,414 tonnes CO₂ equivalent (restated). This comprised 43% from Scope 1 emissions (generated by the direct burning of fuel, predominantly natural gas) and 57% from Scope 2 emissions (generated by the purchase of grid electricity). GWP data for the last five years has been restated from that presented in the group's Annual Report which was published in June 2010. These restatements have been included following recommendations made during the assurance process for this Sustainability Report. These recommendations included the use of North American regional carbon intensity values. GWP data presented in the Annual Report showed an increase from 2008/09 to 2009/10 whereas the restated data in this report shows GWP has fallen slightly. This is a result of the year to year change in the proportion of the group's emissions from operations in North America.



Johnson Matthey does not own the ships, trucks or aircraft used to transport its products and so emissions from transportation are not included in the data. The majority of our products are high value but low volume and so the carbon produced by transportation is low relative to other carbon intensity indicators, for example Scope 2 emissions.

We also report indicative data for our CO₂ emissions from travel by employees on company business. Data is collected from all sites. While we recognise this data does not represent all emissions as a result of company travel, it does provide an indicator and year on year comparator. In 2009/10 CO₂ emissions from travel by employees on company business were 5,796 tonnes, compared with 4,670 tonnes in 2008/09 and emissions from company car travel amounted to 1,040 tonnes, a reduction of 420 tonnes compared to the prior year. As our work on assessing the carbon footprint of our business develops, we will continue to look at ways to expand the level of information we collate on our indirect carbon emissions, including emissions from transportation of our products.




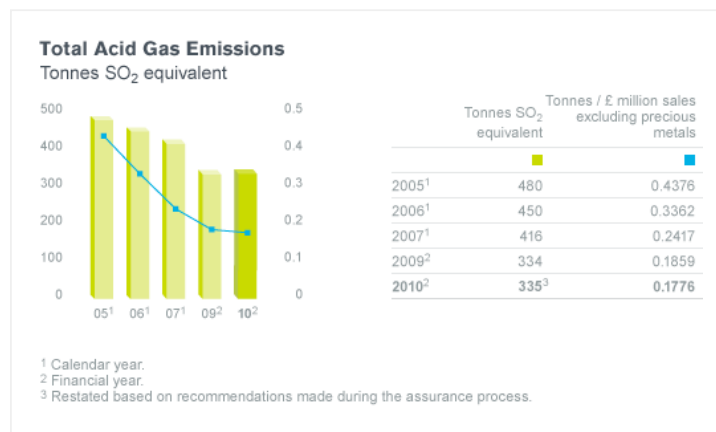
Image: © Luchschen / Dreamstime.com
CASE STUDY
Solar Energy Provides Water Heating at Manesar Site

Our Performance

Other Emissions

Emissions from our operations are generated from a number of sources including combustion processes, materials handling and chemical reactions and are typically licensed by local regulations. All sites monitor emissions to ensure compliance with these regulations and set their own absolute targets aimed at reducing significant emissions as part of their environmental improvement plans.

In 2009/10, our total emissions of acid gases have remained broadly flat and were down 4% relative to sales excluding precious metals compared with the prior year.

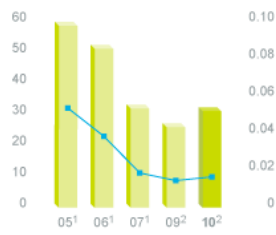


Compared with last year, total NO_x emissions were slightly down at 434 tonnes and down 6% relative to sales excluding precious metals. Total SO₂ emissions increased by 20% to 31.0 tonnes (up 14% relative to sales excluding precious metals). This increase occurred as a result of a review by our Colour Technologies business (based in Maastricht, The Netherlands) of the methods used to determine SO₂ emissions from its processes. This year, raw materials containing sulphates have been incorporated to give a value for SO₂ emissions on a worst case basis. These raw materials are used by the business in its frit making processes and this year it has been assumed that all sulphates are converted to SO₂ and emitted.

The group's emissions of VOCs decreased by 28.3 tonnes (14%) in 2009/10 compared with the prior year and were down 18% relative to sales excluding precious metals.



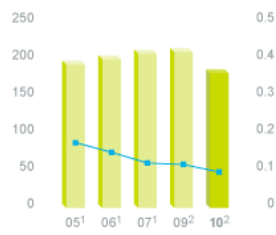
Total SO₂ Emissions
Tonnes SO₂



	Tonnes SO ₂	Tonnes / £ million sales excluding precious metals
2005 ¹	58.5	0.0533
2006 ¹	51.1	0.0382
2007 ¹	31.8	0.0185
2009 ²	25.8	0.0144
2010 ²	31.0	0.0164

¹ Calendar year.
² Financial year.

Total VOC Emissions
Tonnes VOC



	Tonnes VOC	Tonnes / £ million sales excluding precious metals
2005 ¹	192.2	0.1752
2006 ¹	199.5	0.1491
2007 ¹	207.1	0.1203
2009 ²	209.1	0.1164
2010 ²	180.8	0.0959

¹ Calendar year.
² Financial year.

Our Performance

Waste

The total waste generated during the year decreased by 6% across the group and by 11% relative to sales excluding precious metals. Waste to landfill decreased from 5,535 tonnes in 2008/09 to 5,071 tonnes in 2009/10, a further 8% reduction towards our Sustainability 2017 target on waste to landfill.



In terms of other waste streams, 3,251 tonnes of waste was sent for incineration, 13,271 tonnes was sent for recovery and 68,715 tonnes of waste was sent for treatment and disposal by third party waste service providers.

Packaging Wastes

Johnson Matthey collates and quantifies the different types of packaging waste produced by its manufacturing processes as shown in the table below.

Packaging type	2009 Tonnes waste	2010 Tonnes waste	Change %
Steel	2,084	1,863	-11
Paper	486	250	-49
Plastic	648	396	-39
Wood	1,811 ¹	828	-54

¹ Restated.

This is the second year we have reported on our packaging waste. Work is underway to develop our systems to improve the capture and detail of this data going forward, for example to include details on quantities of packaging waste that is recycled.

Johnson Matthey complies with international agreements, regulations and policies that govern the international shipment of waste. During 2009/10, 3,366 tonnes of waste (an increase of 18% compared with 2008/09) was moved between countries predominately for the reclamation and reuse of metal from spent catalysts at our Brimsdown, UK refinery.

Our Performance


Water Consumption

During the year, water consumption decreased by 10% in absolute terms and by 15% relative to sales excluding precious metals compared with the prior year. Of the total water used by the group, 88% was supplied by local municipal water authorities, 8% was drawn from boreholes and 4% was taken from local water courses. A total of 1,275,589 m³ of effluent was produced, an increase of 1% compared with last year, of which 94% was discharged to local authority sewers after treatment and in accordance with local discharge consent agreements and 6% was discharged to water courses after treatment and within quality limits set by local water authorities. The method of water treatment used at each site is appropriate to the effluent quality and volume, and the requirements of the receptor.



The chemical oxygen demand (COD) test is commonly used to indirectly measure the amount of organic compounds in water. Most applications of COD determine the amount of organic pollutants found in surface water (e.g. lakes and rivers), making COD a useful measure of water quality. In 2009/10 the group discharged organic chemicals equivalent to a COD of 236 tonnes into water courses, as regulated by local emission limits at each manufacturing facility. This is a 37% reduction on the prior year.

Johnson Matthey has a robust and effective management system which requires all sites to report environmental incidents to the group's EHS department. During 2009/10 the group has not reported any significant spillages to the environment of raw materials, intermediates or products.



CASE STUDY

Sustainable Solution to Effluent Problems at Panki

Our Aims and Targets

Johnson Matthey's 'EHS Learning Events' initiative is the group's flagship occupational safety programme which has delivered improved safety performance in its first year. In 2010/11, the programme will be extended beyond occupational safety matters and facilities will be encouraged to report environmental and health related issues as well as those involving at-risk safety behaviour.

All our operations have long term environmental improvement plans that incorporate emissions reduction targets to meet the goals of the Sustainability 2017 Vision. Specific projects are underway across the group to help achieve the vision. Our environment related priorities for 2010/11 are to:

- Ensure that the future environmental performance of the group is aligned to the Sustainability 2017 Vision of achieving zero waste to landfill, carbon neutrality and halving key resources per unit of output by helping each business develop projects and other measures to achieve our goals.
- Further understand the potential impacts of business expansion in terms of greenhouse gas emissions and develop systems to reduce these and other environmental impacts.

These priorities will be addressed by checking and focusing on them during site audits and by ongoing communication with facilities throughout the year to promote good practice and encourage the integration of sustainable technologies.

We will also participate in trade association collaborations and work with the regional General Managers at our facilities to ensure compliance with upcoming changes in environmental legislation.

Work will continue to meet our target of achieving ISO 14001 registration at all manufacturing sites by the end of this year. During 2010/11 we will establish plans to ensure that going forward new facilities are able to develop strategies to achieve registration.



CASE STUDY

Recipe for Recycling



Learning events initiative to be **Expanded** in 2010/11

Target to achieve **ISO 14001** at all major manufacturing sites in 2010/11

