

# GE Environmental Report – China (2009)

GE places EHS (Environment, Health & Safety) in an important place. GE has specific requirements to protect the environment and the responsibilities regarding health and safety of its employees, which include: (a) meeting the requirements of China's laws and GE's policies for its operation products; (b) to work to eliminate hazards and provide a safe workplace for employees; (c) to conduct environmental due diligence and EHS impact assessment for any new investment, joint venture, product, service projects in China; (d) to reduce the usage and discharge of toxic or harmful substances and disclose China's Environmental Report publicly, and (e) constantly to improve GE EHS management system and promote EHS awareness and management capabilities in China.

Compliance with China's EHS laws and regulations is the principle, which GE always sticks to, and also is a basic requirement for GE China's productions, operations and investments. In China, GE establishes local EHS regulatory guidance according to the state's regulations with respect to air, water, waste and other environmental aspects, which are used as regulatory references to GE's facilities, suppliers and contractors. In 2010, GE's EHS China Team updated the EHS regulatory guidance and self-assessment checklists according to the latest EHS laws, regulations and standards, which helps GE increasing business in China's market and ensures compliance in the period of China's fast economic growth. In addition, GE China facilities keep good communication with local environmental protection authorities. For instance, GE actively cooperates with government supervision agencies on routine monitoring and submits annual reports on environmental discharges. Regarding new projects and expansions, GE strictly follows EIA (Environmental Impact Assessment) requirements to ensure environmental concept, design, construction and control are well incorporated in the entire process.

Starting in 2004 GE began collecting the greenhouse gas (GHG) emission data from its worldwide operations. In 2006, GE began gathering waste generation data from its operating facilities globally as well as collecting its global water consumption data for facilities, which consumed more than 15 million gallons of water annually. In 2009, GE China released the "2008 GE China Environmental Report" for the first time and disclosed environmental emissions including GHG in order to demonstrate GE's support for transparency.

This report presents key environmental data from GE's operating facilities in 2009.

## Data Sources

In 2009, GE had 26 controlled manufacturing facilities (solely owned or have majority share) in China. By the end of 2009, 3 of 26 facilities have been merged or relocated into others. Compared 2008, the facility number in 2009 decreases by 3. This Report compiles water use, wastewater discharge, air emission and waste generation in 2009 from the facilities' Pollutant Discharge Registration Forms that are to be submitted to government agencies. Greenhouse gas (GHG) emission data are collected from GE's internal reporting system.

In order to better present real changes in environmental discharges caused by increasing production capacity, or affected by acquisitions and divestments, this report introduces ratios of environmental data vs. GE \*China Output, named environmental release intensities, which reflect the environmental effects per an unit of production revenue, and trends of past performance.

We have tried to improve data accuracy by verifying every data from all facilities. The final data are consistent with those submitted to local environmental protection bureaus. All environmental release data in the report are presented

in metric tons, and environmental release intensities are measured by the ratios of environmental data and China Output in million US dollars.

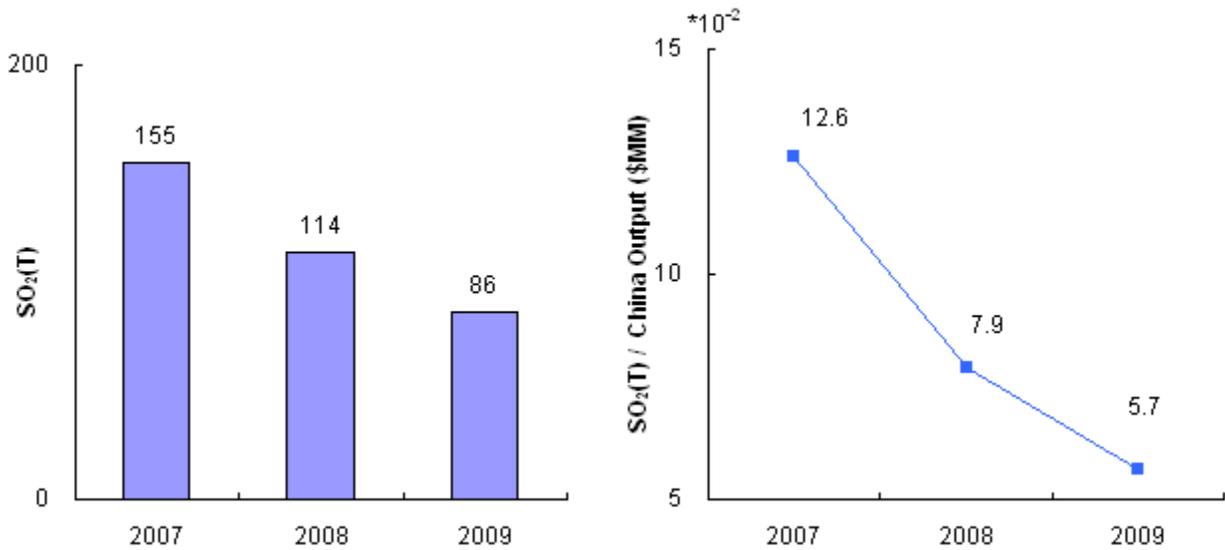
Data reporting each year in this Report excludes GE Advanced Materials Business (Plastics, Silicone and Quartz). Facilities of the Business have been sold since 2007 to 2008.

*\*China Output: revenues from all GE China facilities' production, including sales in China and overseas, but imports to China and China's service revenues excluded.*

## Key Environmental Indicators

### Air - SO<sub>2</sub> Emissions

After a 26.5% decrease of sulfur dioxide (SO<sub>2</sub>) emissions from 2007 to 2008, the sulfur dioxide (SO<sub>2</sub>) emissions in 2009 from GE China facilities were 86 metric tons, a 24.6% further reduction compared to 2008. This was mainly the result of continuously replacing coal-fueled boilers with natural gas, which greatly reduced emissions. Moreover, SO<sub>2</sub> emission intensity (SO<sub>2</sub> emissions / China Output) has decreased by 54.8% in past 3 years.

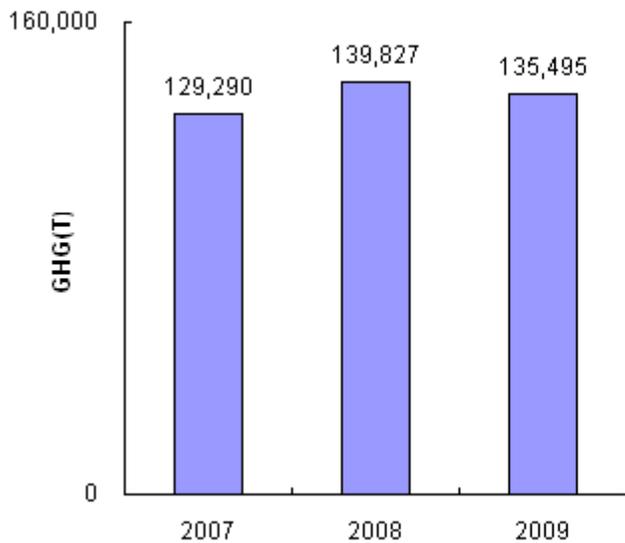


Sulfur Dioxide (SO<sub>2</sub>) Emission (Metric Ton)

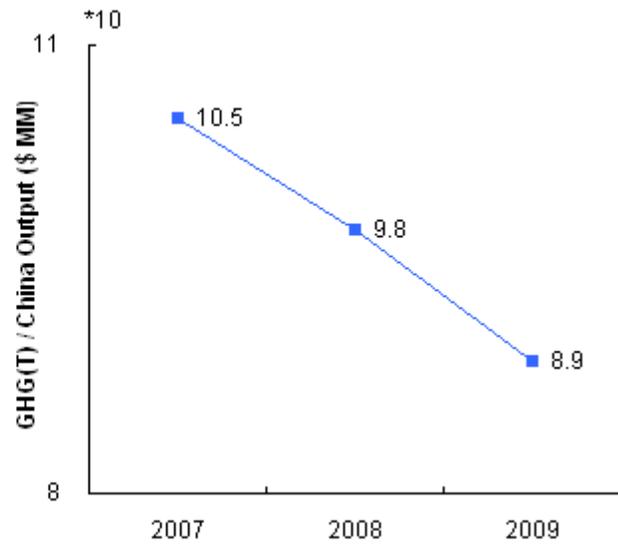
Sulfur dioxide (SO<sub>2</sub>) Emission Intensity

### Air - Greenhouse Gas Emissions

From 2008 to 2009, China's greenhouse gas (GHG) emissions decreased by 3.1%. Although GE China Output has increased by 6.42% in 2009, the GHG figure in intensity still shows a decrease of 9.2% compared to 2008.



Greenhouse Gas (GHG) Emission (Metric Ton)



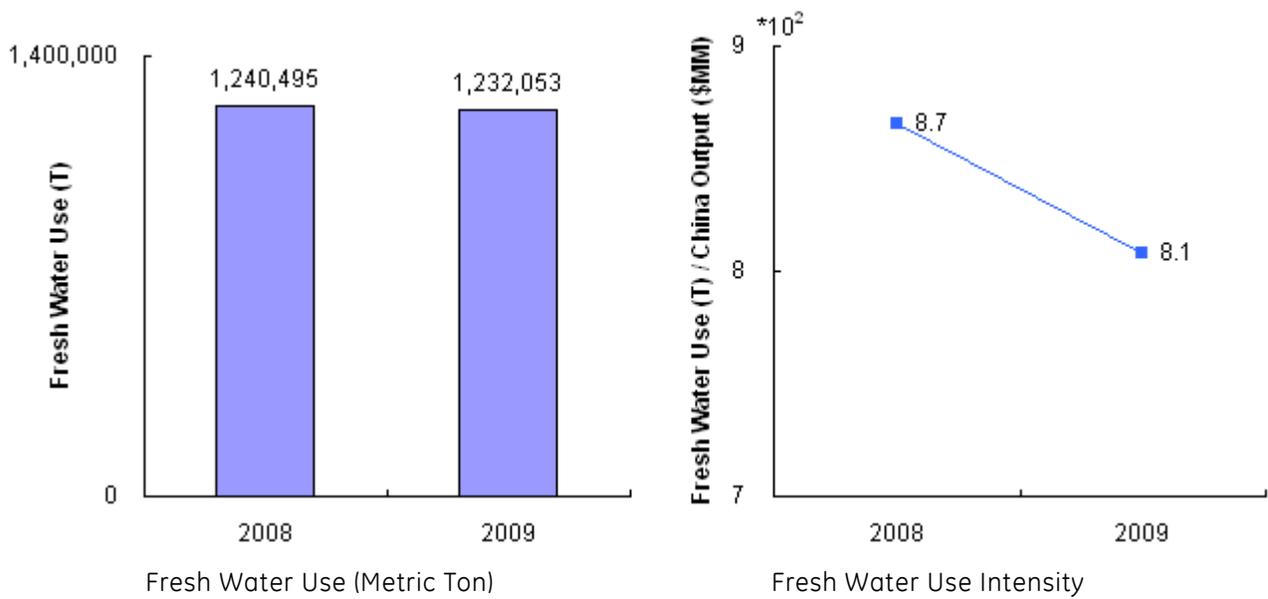
Greenhouse Gas (GHG) Emission Intensity

The decrease of GHG emission intensity is the result of GE China facilities' promoting "Treasure Hunts" to further reduce fossil fuel energy use and electricity saving after achieving the "ecomagination" commitments of GHG emission reduction in 2008 (GHG intensity 30% reduction by 2008).

*More information on the details of GE's GHG inventory, including methodology, Quality Control/Quality Assurance process, verification of our baseline GHG inventory, and the extent to which GE follows the World Resources Institute (WRI)/World Council for Sustainable Development (WBCSD) GHG Protocol can be found at [www.ge.com/citizenship/performance\\_areas/environment\\_health\\_safety\\_inv.jsp](http://www.ge.com/citizenship/performance_areas/environment_health_safety_inv.jsp). To learn more about our ecomagination commitments, please visit [www.ecomagination.com](http://www.ecomagination.com).*

### **Fresh Water Use**

Water consumption includes public potable water, process and sanitary water, as well as non-contact cooling waters from freshwater sources. Total GE China fresh water use in 2009 was reduced by 0.68% compared to 2008. As mentioned above, GE China business and production capacity have been increased and improved in 2009, whereas total fresh water use intensity in 2009 still dropped down by 6.9% since 2008.

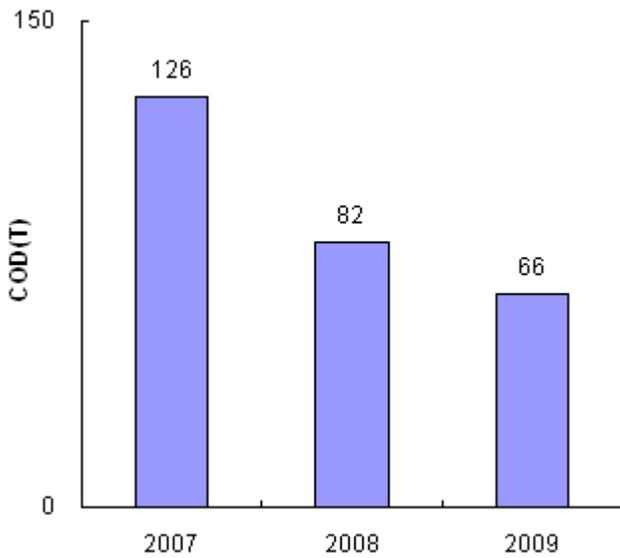


In 2009, GE China facilities completed a number of projects for water saving and wastewater discharge reduction, including recycling treated wastewater and repairs of underground water supply pipes, which resulted in more than 20% wastewater discharge reduction in some facilities. Because of enhancement of water recycling and reuse, fresh water use only accounts for 53.6% of total water consumption.

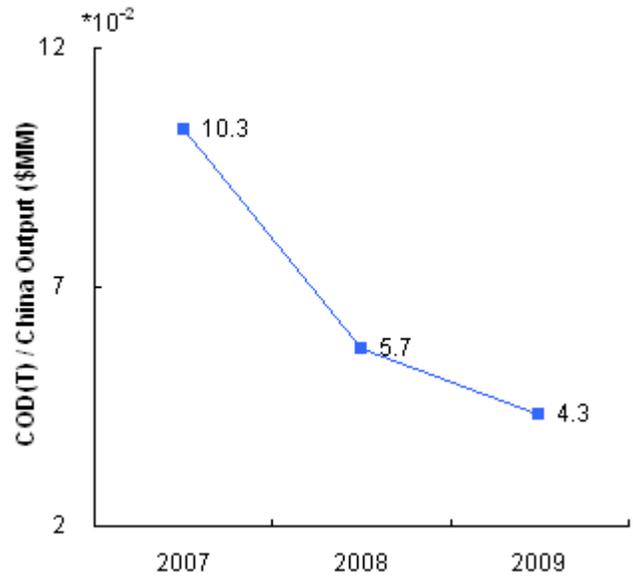
*In 2008, we announced a global water reduction goal for our manufacturing operations – a 20% reduction by 2012 from our 2006 baseline. During the past few years, we have designed a lot of tools to help facilities implement water saving measures and assess the benefit on water saving, To learn more about this initiative, please visit [www.ge.com/citizenship/performance\\_areas/environment\\_health\\_safety\\_water.jsp](http://www.ge.com/citizenship/performance_areas/environment_health_safety_water.jsp)*

### **Wastewater – COD**

Chemical Oxygen Demand (COD) discharged from GE China facilities was 66 metric tons in 2009, 19.5% less than 2008. Approximately 54.8 metric tons of COD (83% of the total) was discharged into municipal pipelines for further treatment by POTWs. As indicated by COD intensity trend in past 3 years, the COD discharges per a unit of production revenue are decreasing every year and reach 24.6% reduction from 2008 to 2009.



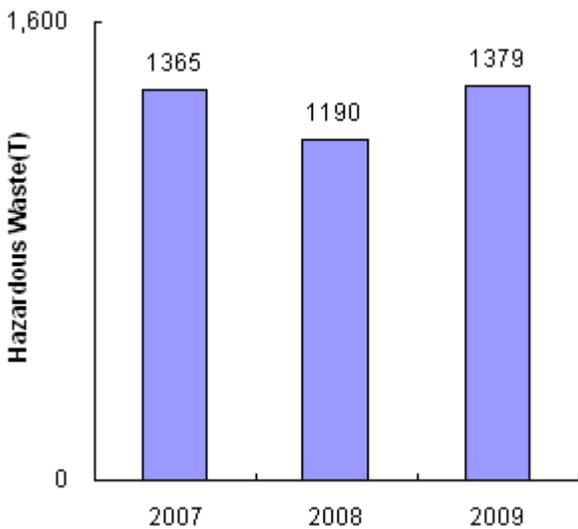
Chemical Oxygen Demand (COD) Discharge (Metric Ton)



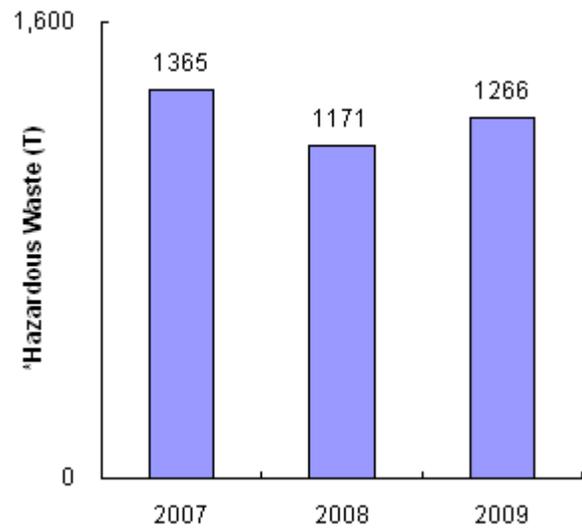
Chemical Oxygen Demand (COD) Discharge Intensity

### Hazardous Waste

In 2009, GE China facilities generated 1,379 metric tons of hazardous waste, an increase of 15.9% compared to 2008. It should be noted that electrical and electronic wastes were newly added into the revised China's National Hazardous Waste Catalogue released on August 1, 2008, which resulted in additional hazardous waste – electrical and electronic wastes, accounting for 1.14% of total hazardous waste in 2009. In addition to this change, more hazardous wastes were generated in 2008 and 2009 from facilities' one-time scrap due to equipment and process improvement or replacement. In spite of these effects, 2009 hazardous waste generation actually increased by 8.11% compared to 2008. In terms of hazardous waste intensity, the hazardous waste generation per China Output has reduced by 20.2% from 2007 to 2009 without considering the one-time scraps and electronic and electrical wastes raised from the new regulation. GE has a very rigor internal review process, requiring all hazardous wastes are disposed of only at permitted sites, which have been audited and approved by GE.



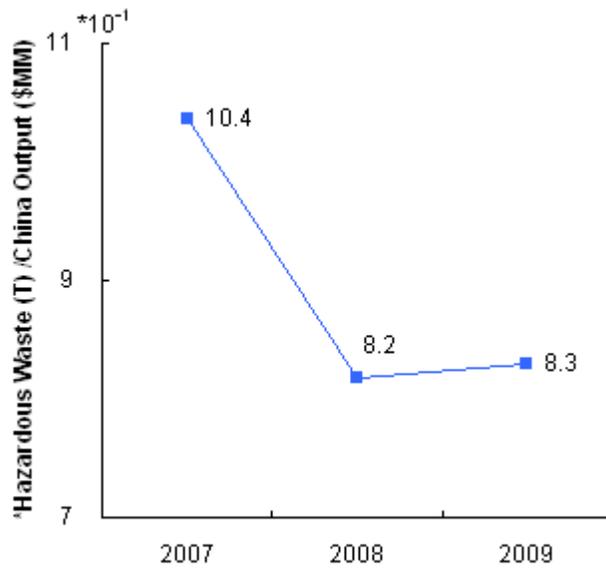
Hazardous Waste Absolute Generation (Metric Ton)



Hazardous Waste Adjusted Generation (Metric Ton)

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*\*Hazardous Waste Adjusted Generation: Hazardous waste amounts excluding one-time scraps, as well as electrical and electronic wastes.*



\*Hazardous Waste Adjusted Generation Intensity

In 2009, GE sites and businesses received 15 major EHS awards or recognitions from government in China. These include the recognitions on overall EHS performance, as well as some specifically highlighting excellent environmental achievements at our sites, e.g. Shanghai CTC (China Technology Center) and Energy Hangzhou site were rated by local EPB (Environmental Protection Bureau) as “Green Grade” (excellent level in environmental performance credit classification). Energy Wind Shenyang site was recommended by EPB to United Nations as Environmental Protection Model etc.

While GE continuously improving its own EHS performance, GE continues to identify ways that GE can assist its suppliers in EHS capacity building. China is a place where GE has significant numbers of suppliers, GE focuses on the need to find efficient ways to encourage suppliers to improve overall management of EHS, labor, and security compliance in addition to closing specific findings. In 2008, GE collaborated with the Institute for Sustainable Communities (ISC), and other companies developed a low-cost continuing education program called the “EHS Academy” at Lingnan College of Sun Yat-sen University for EHS professionals in China. The project leveraged multinational expertise for training materials, guest lecturers, and role model sites.

GE is also working with NGOs and communities to explore various ways to support and encourage its suppliers to improve their performance in environmental protection, safe production and labor management, e.g. requiring GE supplier auditors to use IPE (Institute of Public & Environmental Affairs) Website to check supplier compliance information. Since 2002, there are 3875 suppliers that have been reviewed or audited in China. For year 2009 alone, there were total 34857 findings identified, 94.34% of them were closed by end of the year. GE carried out initial inspection, and re-inspection, urged and encouraged suppliers to close identified findings in order to meet China regulatory requirements, as well as risk mitigation. So far, GE has a total of 111 certified auditors in China.