

# One Green World: Global Strategies for Environmental Leadership

**HITACHI**  
Inspire the Next

Hitachi, Ltd., our parent company, and Hitachi Global Storage Technologies (GST) are committed to reducing impact on the environment at every stage of a product's lifecycle. From power-efficient designs to eco-friendly



manufacturing to reuse and recycling of our products, our focus is on environmental responsibility. Hitachi believes that protecting the environment for future generations is the right thing to do, and we are focused on becoming emission-neutral by the year 2015.

From the highest levels of the company to our community

outreach programs, we are focused on reducing greenhouse gas emissions and preventing further global warming. We are determined that our products and manufacturing techniques will meet or exceed local and international environmental standards, and this stance is integrated into our worldwide business strategies.

## What's Good for the Environmental is Good for Business

As power demands of IT equipment continue to escalate, developing new products that minimize power usage, cooling demands and floor space requirements is essential. According to the Environmental Protection Agency (EPA), data centers are now consuming over 1.5% of all electricity used in the United States. In today's IT environments where petabytes of data are routinely stored, incremental savings in power add up quickly. Significantly, what's good for the environment is also good for business—based on a data center with 10,000 drives, power savings alone can quickly exceed \$100,000 on an annual basis by switching to more power-efficient drives.

Hitachi GST leadership in energy efficiency goes beyond the enterprise environment. For mobile computer users, power efficiency and extended battery life translate to increased personal productivity. In the desktop environment, increased efficiency means computers that meet ENERGY STAR® requirements and deliver better performance with less power. While industry trends are to sacrifice performance for power efficiency, the superior design of the Deskstar 7K1000.B hard disk drive delivers the best of both worlds: high performance and industry-leading low power.

For consumer electronics and DVR applications, low power means cooler operation which can lead to quieter and more cost-effective designs (e.g., a cooler drive could eliminate fans in DVRs).

Many Hitachi drives can be configured to reduce power demands, which also decreases cooling needs and increases overall reliability. Three power-saving states are available: Unload, with power savings of 24% through sending the heads to the ramp; Low RPM, with power savings of 54% by reducing spin rate by 40%; and Standby/Sleep, with power savings of 87%, which removes power to the disk\*.

## Green Manufacturing Pays Off

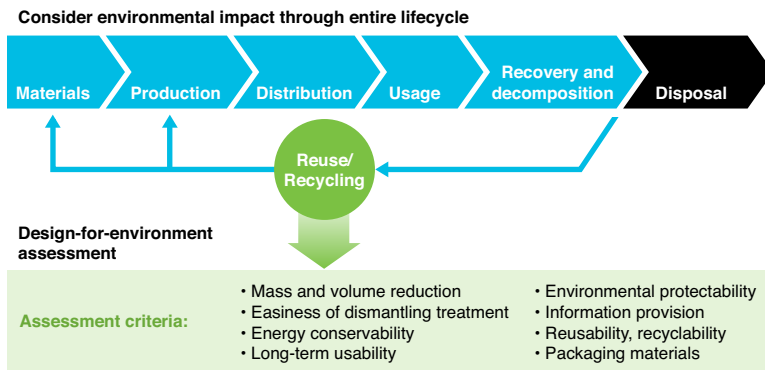
Green strategies start with low-power designs, but that's not enough. Bringing energy-efficient products to market in an environmentally friendly way is essential, and Hitachi GST is constantly re-evaluating its processes to minimize greenhouse gas emissions, conserve natural resources and coexist harmoniously with the environment. Across the globe, our manufacturing facilities are focused on reducing their impact on the environment, and on conserving natural resources:

- Prachinburi, Thailand. Achieved 100% hard disk drive waste water recycling and was recognized by the Thai government for its efforts.
- Shenzhen, China. Completely eliminated toxic volatile organic compound emissions, improved energy efficiency by 6.4% and cut water use by 90% through recycling and reuse, saving over half a million gallons per day.
- Laguna, Philippines. Improved energy efficiency by 12.6% and reduced CO2 emissions by 11% year-over-year.
- Singapore. Improved energy efficiency by 6.2% and won the Most Prestigious Government Award, also known as the "Green Oscar," as well as the Singapore Green Leaf Award.

Hitachi, Ltd. has created two concepts to benchmark environmental progress: Super Eco Products and Super Eco Factories.

- The **Super Eco-Product** classification applies to industry-leading products and services designed to reduce greenhouse gases and conserve natural resources. One example is the Hitachi Travelstar 5K320, a highly efficient 320GB 2.5-inch drive that delivers exceptional battery life and performance.
- The **Super Eco-Factory** certification was created as a way to develop and promote industry-leading environmental practices and to apply them globally to our manufacturing facilities. Hitachi, Ltd. has certified 18 Super Eco Factories, seven of which are Hitachi GST locations, a clear indication of our commitment to global environmental issues.

\* Based on testing conducted on the Hitachi Deskstar 7K1000.B



*Hitachi is committed to environmental leadership at each phase of the product life cycle, from energy-efficient designs to responsible recycling and reuse.*



Hitachi GST EcoTrac drives provide the low-power design and performance that help businesses save on power expenditures and individuals obtain more operating time from their notebook computer batteries. The EcoTrac mark identifies products that provide maximum benefits to our customers through power efficiency and minimal impact to the environment over the product life cycle.

### Products Must Also Be Recyclable

All Hitachi GST products are engineered to give years of trouble-free performance and satisfaction to the user. When they finally need to be replaced, their environmentally friendly design enables them to be quickly and easily recycled. In Europe, strict compliance with the Waste Electrical and Electronic Equipment (WEEE) and Reduction of Hazardous Substances (RoHS) directives, as well as compliance with the Substances of Very High Concern (SVHC) candidate list maintained by the European Chemical Agency, means that your Hitachi product will not harm the environment when its useful life has ended. Hitachi has set a corporate goal to meet or exceed environmental guidelines worldwide, including the complete phase-out of halogens in all new 2.5-inch and 3.5-inch SATA drives in 2009, and reducing the use of halogens in enterprise drives in 2010.

### Packaging Materials and Transportation Have Large Impacts

Creating energy-efficient products in environmentally friendly facilities is a good place to start, but Hitachi doesn't stop there. Our innovative packaging dramatically reduces the usage of plastic and paper. In fact, new shipping strategies for 2.5-inch drives has reduced plastic packaging by 58%, and paper packaging by 52%. Packaging for 3.5-inch drives now uses 1/3 less plastic,

and we've reduced our already low paper usage by an additional 13%. Even our shipping pallets are eco-friendly—lightweight, reusable plastic pallets save trees, do not require toxic fumigation and are easily recyclable.

Efficient transportation is another key component of our efforts to protect the environment—ocean shipping as opposed to air freight cuts CO2 emissions by up to 97%, and trucking yields similar savings of up to 91% over air. We quadrupled our use of ocean shipping in 2007, and tripled it again in 2008, preventing tons of greenhouse gases from entering the atmosphere.

### Hitachi GST—Award-Winning Environmental Leadership Worldwide

- 2007 National Excellent Corporate Social Responsibility (CSR) Fulfillment Award, Shenzhen, China
- 2007 Clean Production Enterprise Award, Shenzhen, China
- 2007 Singapore Environmental Achievement Award
- 2007 Philippine Economic Zone Authority Environmental Performers Award
- 2006-2004 Waste Reduction Award Program, San Jose, CA
- 2005 Prime Minister Industrial Award, Prachinburi, Thailand
- 2004 Kanto Area Chairman's Award, Fujisawa, Japan

### Conclusion

As a large corporation and as a citizen in several communities around the world, Hitachi GST is demonstrating its commitment to environmental issues at every level. From reducing greenhouse gases to designing energy-efficient products to our focus on corporate social responsibility, we are determined to lead the way in protecting the environment for current and future generations. For more information on how Hitachi is creating a greener future, please visit us at [www.hitachigst.com/environment](http://www.hitachigst.com/environment).

ENERGY STAR is a trademark of the United States Environmental Protection Agency.

Product specifications provided are sample specifications and do not constitute a warranty. Information is true as of the date of publication and is subject to change. © 2008 Hitachi Global Storage Technologies

© 2008 Hitachi Global Storage Technologies

Hitachi Global Storage Technologies  
3403 Yerba Buena Road  
San Jose, CA 95135 USA

Produced in the United States 11/08.  
All rights reserved.