

The Green Initiative

NTT AMERICA GREEN DATA CENTER SERVICES

WHY SUPPORT GREEN DATA CENTER SERVICES?

- Responsible stewardship of the environment
- Demonstrates corporate citizenship
- Establishes good business practice
- Demonstrates leadership

NTT AMERICA BENEFITS

- Defined action plan
- Carbon reduction programs in place
- Support of energy efficient servers
- Carbon Balanced Hosting
- Customer Partnership

DATA CENTER LOCATIONS

- Santa Clara, CA
- San Jose, CA
- Ashburn, VA
- Sterling, VA
- New York, NY

Taking Action on Behalf of the Environment and Our Customers

Appropriate stewardship of the environment is an emerging and serious concern across broad swathes of society, business and government. Responsible businesses are taking proactive measures to assess their contribution to this growing area of global concern, and to institute corrective and mitigating programs to combat the underlying root causes of the problem. NTT America is one such company taking a leadership role in establishing good business practices for its data centers and implementing a company-wide action plan to reduce harmful contributions to the environment.

GREENER DATA CENTERS

With heightened focus on the environment, enterprises are under increased scrutiny, especially their high technology and data center based operations. In response to this challenge, NTT America has instituted The Green Initiative – a company-wide strategic program

that aims to lower emissions from its commercial data centers, establish good environmental practice and discipline throughout its corporate operations, and encourage customer participation and partnership.

ESTABLISHING AN ACTION PLAN

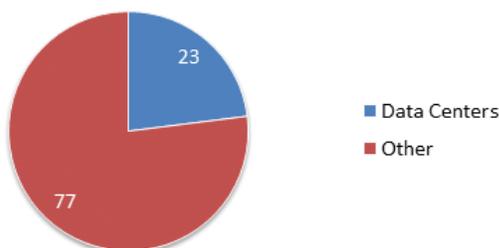
NTT America's long-term strategy and plan are the result of several assessments by, and consultations with, leading experts in the industry.

The Green Grid is one such industry group providing guidance and direction to NTT America. The Green Grid is an influential industry consortium representing IT manufacturers and data center providers. It addresses the issue of facility and hardware efficiency as well as standardization, ratings and regulation.

NTT America also commissioned and completed an extensive audit of its data centers; looking at all aspects of power consumption, cooling requirements, heat dispersion and overall impact to conservation and the environment. Going forward, operational improvements are being driven based on key business and performance metrics.

NTT America's Green Initiative is being executed via a wide-ranging action plan centered on three major areas of concentration: the data centers themselves, company-wide across NTT America and customer participation.

Carbon Emissions from Information and Communications Technology



Sources: Gartner

DATA CENTER ACTIONS

There are many metrics used to measure a data center's effect on the environment. The most commonly used is PUE (Power Utilization Efficiency), which is simply the total power generated by the datacenter divided by the power generated by the IT equipment. In order to minimize PUE one must look at lowering overhead power consumption such as cooling, lighting, heating etc.

Venting hot air from equipment rooms more quickly and efficiently can make a significant impact on power usage. NTT America is rolling out vented ceilings in its data centers, dramatically increasing hot air extraction resulting in improved cooling and reduced power usage. Hot aisle/cold aisle rack arrangements, and curtains separating hot and cold areas, are in place. NTT America Data Centers use DASH (Datacenter Automation Software and Hardware), a dynamic cooling energy management system. The system uses advanced artificial intelligence-based technology with networked temperature sensors to optimize the efficient use of CRAC units so that they deliver only the necessary cooling air at any time, thereby reducing their operation time, which results in less cooling energy consumption.

Another area is alternative fuel sources. NTT America is working with utility suppliers to look at lower emission power sources, such as wind farms, and is also investigating alternative technologies such as fuel cells.

NTT America is also working with customers and vendors to support the newer breed of power efficient servers. New-generation servers and network switches have power management features and improved processing efficiency, reducing per-unit power requirements.

CORPORATE OPERATIONS

Outside of the data centers, NTT America is implementing a number of initiatives to promote good environmental practices within the company and to lower carbon emissions in its day-to-day operations. Key activities include:

- Investment in the latest technology to recycle equipment packaging, cables, shredded hard drives, and obsolete IT equipment
- Subsidization of mass transit for employees, and incentives for telecommuting, as appropriate

Current Actions

Comprehensive action plan
Improved and more efficient air flow management in data centers
Alternative power supplies
Improved recycling
Subsidized mass transit and telecommuting
Carbon Balanced Hosting – using carbon offsets to balance emissions

- Evaluation of NTT America facilities to identify opportunities for improved conservation
- Offsetting the carbon footprint of NTT America's internal IT infrastructure

WORKING WITH CUSTOMERS

An important component of The Green Initiative is customer outreach and collaboration. This is accomplished by promoting and supporting customer upgrades to more energy efficient servers, while also offering them Carbon Balanced Hosting.

Given today's technology, it is inevitable that some carbon emissions will be produced by data centers. Carbon Balanced Hosting looks to offset a customer's carbon footprint in NTT America data centers by offering an optional customer ability to purchase compensatory carbon offsets. These carbon offsets fund initiatives to produce energy more efficiently, or remove carbon from the atmosphere.

NTT America has teamed with a leading retail carbon-offsetting service provider – TerraPass. TerraPass supports a number of independently audited programs, mainly in the area of alternate energy such as wind farms and methane capture. Customers purchasing these offsets are provided a statement detailing the actual usage of the offset fund. Setting pace for this customer initiative, NTT America has already voluntarily offset its own internal IT infrastructure.

MOVING FORWARD

Contact us today to learn more about NTT America's Green Initiative and its ongoing activities to serve as a responsible and effective caretaker of our collective environment.



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NTT America