



**Maryland
Green Registry
MEMBER**

The Maryland Green Registry promotes and recognizes sustainable practices at organizations of all types and sizes. Members agree to share at least five environmental practices and one measurable result while striving to continually improve their environmental performance.

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Information Technology

Member since April 2010

Management and Leadership

Environmental Team

PSI's environmental team includes members from across the organization, including the departments of Marketing, Information Technology, Human Resources / Training, and Facilities Management. Members meet periodically to discuss new green initiatives, progress towards established goals, environmental education, and community opportunities. Our mission is to encourage environmental awareness in the workplace by identifying readily achievable measures to reduce waste and save energy.

Environmentally Preferable Purchasing

Our procurement approach includes purchasing recycled content products and reusing materials instead of buying new ones whenever possible. We annually revisit our supplies to determine which suppliers are providing green products and services.

In an effort to become more environmentally conscious, PSI has put a plan in place to ensure that the IT Department takes advantage of every possible opportunity to establish a "Green IT" environment by using more energy efficient technologies, recycling old or obsolete computer equipment, and sharing equipment – such as printers and servers – wherever possible.

- *PSI has a business relationship with – and purchases its computers from – Dell, who is the first major computer company to reduce their carbon emissions and the first to drive toward large-scale recycling in a major way.*
- *We purchase 30% post-consumer waste recycled Hammermill Great White copy paper for office use.*

- *We are looking into adding a line of 100% corn-based products to our marketing giveaways as part of a marketing campaign that advocates a greener lifestyle.*
- *We recently reduced the size of our new hire printed packets by 66% by replacing them with digital media (CD/thumb drive).*



Environmentally Preferable Products and Services

PSI provides Green Enterprise Solutions for businesses that want to be environmentally responsible and use sustainable resources. Our green initiatives include: Storage Sharing, Server Virtualization, Blade Technology, eLearning, Telemedicine, and Data Center Consolidation. These initiatives reduce the enterprise's environmental impact and reduce waste while cutting costs through increased efficiency.

- ***Storage Sharing*** - *PSI has taken on the task of moving from a single server single disk set, to a multiple server single disk set. This is a trend towards utilizing hard disk capacity more efficiently due to less waste of hard disk space on individual servers and viewing our hard disk space as a resource pool for an entire set of servers. Less hard disk waste means fewer hard disks and thus less energy to run the hard disks.*
- ***Server Virtualization*** - *PSI has implemented VMWare technology to consolidate current standalone servers, as well as future servers for projects and company infrastructure. VMWare technologies have enabled PSI to run multiple server instances on a single server; reducing energy and cooling consumption. To date, PSI has consolidated 13 physical servers to VM and runs a total of 65 Virtual Servers on just 6 blades.*
- ***Blade Technology*** - *PSI used Dell Blade technology to serve as the backbone of the VMWare environment. This allows PSI to use one Blade Chassis for single power consumption that spans energy across 8 full or 16 half blades. This reduces the cost of setting up a single server for hosting VMs and requires much less cooling than standard 2U servers.*

The Dell Blades feature the following "Green" characteristics:

- *Ultra-Efficient Power Supplies deliver high levels of efficiency (>91%) even at low utilization.*
- *Dynamic Power Supply Engagement to provide maximum power utilization based on system demands.*
- *Optimized airflow design with ultra-efficient fans in cooling zones help ensure that only the minimum amount of air required by the enclosure is consumed, improving data center efficiency.*
- *Lead free chassis with lead reduced I/O options.*

- **eLearning** - Since February 2006, PSI's "MHS Learn Courseware Development, Program Support, and LMS Sustainment" contract with the Military Health System (MHS) provides support for the lead program office to conduct distributed learning and collaborative programs across the MHS. Our eLearning services provide a higher level of convenience and flexibility for learners, who can participate in web courses anywhere, 24x7. eLearning has a positive impact on the environment because travel and physical classroom maintenance are no longer necessary. In December 2010, PSI won the eLearning Leadership Award from the Veterans Affairs' My Recovery Plan, demonstrating PSI's dedication to providing excellent support in environmentally friendly IT ventures.
- **Telemedicine** - VIRTUAL IRAQ, a program managed by PSI's Telehealth Team, is designed to treat service members with Post Traumatic Stress Disorder (PTSD) and Traumatic Brain Injury (TBI). Subsequent procurement will provide Telemental Health Consultation Services capability utilizing Video Teleconferencing (VTC) technology. VTC systems are being deployed at 85 Medical Treatment Facilities (MTFs) across the Air Force Medical Services (AFMS) enterprise, in addition to one unit at PSI's principal office. Teleconferencing allows medical personnel to conduct consultation services remotely without the need to travel. By reducing or eliminating the need to travel, fewer carbon emissions are created, benefiting the environment.
- **Data Center Consolidation** – PSI offers data center consolidation solutions to address the Federal Data Center Consolidation Initiative. Customers who take advantage of our hundreds of thousands of feet of available floor space realize reduced costs and increased security and efficiency. Data Center Consolidation also leverages best practices and promotes the use of green IT through the reduction of the number of data centers. A reduction in data centers, each of which requires energy for power and cooling, causes a reduction in the total amount of energy consumed.

Waste



Recycling

PSI recognizes that recycling is a top priority and, by working together, we can divert even more recyclable material from landfills – preserving natural resources and energy and thereby saving expenses. For that reason, all employees are provided with a small cardboard desk-side recycling container for the disposal of mixed paper. In addition, larger cardboard recycling collection containers are provided for disposal of glass, metal and plastic in pantries, and paper in copy rooms and printer areas.

We also have a service agreement with the Shred-it company to provide shredding and recycling services for large quantities of paper. Shred-it shreds and

recycles 1,200 lbs of paper from PSI's offices per month (a total of nine bags per month).

List of recycled materials:

- **Paper** - Colored paper, white paper, soft cover books fax paper, clean paper bags, Post-its, newspapers, magazines, envelopes, FedEx envelopes, glossy paper/brochures, empty (cold liquid) paper cups, phone books, and receipts
- **Plastic** - Bottles, jars, disposable cups, yogurt cups, jugs, plates, and plastic grocery bags
- **Cans** - Aluminum and steel cans, empty aerosol containers, aluminum foil, tin coup cans, tin coffee containers
- **Glass** - Bottles and jars
- **Cardboard** - Boxes
- **Electronics** - At a minimum of once a year, PSI disposes its obsolete equipment by contracting with certified PC recyclers. This practice also lowers our impact of e-waste – including toxic chemicals and heavy metals. One hundred percent of the equipment is recycled. Nothing is left to be disposed of in a landfill. The company that we use is certified by the Defense Logistics Information Service.
- **Recycle Wastebaskets** - Installed in all offices

Energy

Energy Efficiency

We are looking into new ways to cool our server room with technologies such as single rack focused cooling solutions that will put a rack into a cooled enclosure rather than trying to cool an entire server room. This reduces energy requirements and increases the efficiency of cooling in the server infrastructure.

In addition, our new Technology Innovation Center features compact fluorescent lighting.

Transportation

Employee Commute

Mass Transit: *PSI encourages mass transit use by posting helpful information on our corporate Intranet and distributing announcements to employees via email. Distributed mass transit information includes: commuter benefits, FAQ's, IRS pre-tax incentives, commuter pass ordering instructions, and public transit shuttle schedules. PSI offers a \$255/month (tax free) incentive for employee transportation to and from work via train, bus, subway, or vehicle that seats six or more adults. PSI employees*

can also purchase transit passes with their Discovery Benefits debit cards at their transit authority.

Ridesharing: PSI encourages ridesharing by offering a Parking and Transit program. This program entitles employees to purchase parking and/or transit (commuter) passes using pre-tax money. A total of 72 employees participate in this plan.

Telecommuting: PSI offers employees a flexible working environment in both working location and hours. With manager approval, employees may telecommunicate from home. Because PSI provides a laptop to every employee, there is no difference in the computer setup used when telecommuting remotely, which allows employees to work effectively and efficiently and conduct meetings from home. Telecommuting is further facilitated by VPN technology and Broadband Internet connections. This technology allows our employees to work anywhere, anytime.



Efficient Business Travel

- PSI supports efficient business travel through teleconferencing, mass transit, ridesharing, telecommuting, and virtual training.

Teleconferencing: PSI's business policies promote teleconferencing through the regular use of webinars, telecollaboration, and conference calls. PSI uses the following teleconferencing technology: Citrix GoToMeeting, Citrix GoToWebinar, and HiDef Corporate Conferencing. .

- All of PSI's corporate-wide meetings, including our quarterly all-hands meetings, are hosted via GoToWebinar. PSI also frequently utilizes GoToMeeting for our other meeting needs. Our total GoToMeeting/GoToWebinar stats for 2010 are as follows:
 - Total Meeting/Webinars: 846
 - Total Attendees: 3,230
 - Total Duration: 52,994 minutes (equivalent to 110 working days)
- Weekly department and project status meetings are conducted via HiDef Corporate Conferencing. In 2010, PSI employees spent a total of 188,341 minutes on HiDef Corporate Conferencing phone calls.

Virtual Training: PSI maximizes the opportunity to use "virtual" classroom sessions in place of physical classrooms. This eliminates travel requirements and the attendant fuel use and carbon emissions. We use Cisco WebEx online Meeting Center and Training Center webinar and virtual training services, which provide video, audio and interactive participation. PSI also maximizes the use of online, self-paced "e-learning," another replacement for live classroom and travel. These two learning delivery methods eliminate the travel for approximately 200 employees. If PSI used a traditional classroom method for

training, our employees would need to make about 12 trips per year to learn from our corporate trainer in person. Therefore, virtual training saves PSI 2,400 employee trips per year. At an average of 80 miles per trip, PSI saves 192,000 miles of driving, 175,872 pounds of CO2 emissions, and 8727 gallons of gas, while also saving \$344,000 annually in travel costs.

Profile Updated April 2016



Maryland

Help build a greener, more sustainable Maryland through voluntary practices that reduce environmental impacts and save money.

Learn more at www.green.maryland.gov/registry

