

What is Green Computing?

Green Computing, or **Green IT**, is the practice of implementing policies and procedures that improve the efficiency of computing resources in such a way as to reduce the environmental impact of their utilization. Green Computing is founded on the “triple bottom line” principle which defines an enterprise’s success based on its economic, environmental and social performance. This philosophy follows that given that there is a finite amount of available natural resources, it is in the interest of the business community as a whole to decrease their dependence on those limited resources to ensure long-term economic viability. Just as the logging industry long ago learned that they need to plant a tree for each that they cut, today’s power consumption enterprises must maximize the conservation of energy until renewable forms become more readily available. This is often referred to as “sustainability” – that is, the ability of the planet to maintain a consistent level of resources to ensure the continuance of the existing level of society and commercial enterprise.

Green Computing solutions address a broad set of environmental issues targeted at attaining sustainability. These solutions include:

- **Energy Efficiency** – Maximizing the power utilization of computing systems by reducing system usage during non-peak time periods.
- **Reducing Electronic Waste** – Physical technology components (keyboards, monitors, CPUs, etc.) are often not biodegradable and highly toxic. Several business and governmental directives have been enacted to promote the recycling of electronic components and several hardware manufacturers have developed biodegradable parts.
- **Virtualization** – By utilizing a single server to provide the virtual services that would otherwise need to be provided by multiple systems, overall power consumption is reduced.
- **Employing Thin Clients** – These systems utilize only basic computing functionality (and are sometimes even diskless), utilizing remote systems to perform its primary processing activity. Since antiquated systems can be used to perform this function, electronic waste is reduced. Alternatively, new thin client devices are now available that are designed with low power consumption.
- **Telecommuting** – Providing the facilities necessary to allow employees the ability to work from home in order to reduce transportation emissions.
- **Remote Administration** – Allowing administrators the ability to remotely access, monitor and repair systems significantly decreases the need for physical travel to remote offices and customer sites. As with telecommuting, this reduced travel eliminates unnecessary carbon emissions.
- **Green Power Generation** – Many businesses have chosen to implement clean, renewable energy sources, such as solar and wind, to partially or completely power their business.

Of all these, “Energy Efficiency” provides the greatest potential for quick return on investment, ease of implementation, and financial justification.