

Green Technology and What It Means



By Phil Scrivano

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When I think about “green technology,” I can’t help but recall working for an Air Quality Control District during my summers away from the classroom. This experience showed me that companies asked to comply with stricter standards did so by becoming more efficient and using the best available control technology known as BACT. A byproduct of efficiency and BACT was greater profitability for the companies.

I believe we can apply the same concepts to education technology. Efficiency, better technology, and saving money are on the minds of every IT director. In this article I will explore best practices in green IT administration.

For my example I will assume a K-12 district with 4,000 ADA and seven sites.

Technicians today support 150 to 300-plus computers each and are a limited resource. With little formal structure, shared technicians are often deployed in a manner that results in many miles of driving and less onsite time. A help-desk priority system and onsite technician protocols help increase efficiency in this area. To set the priority system, there first needs to be a set schedule for on-site technician time. During this onsite time, the technician checks in with the site secretary and works on technology issues that staff have e-mailed the secretary in advance. These are non-pressing issues or software support training that the user did not feel needed to be escalated to a help desk call. Time at each site should be monitored by the director and adjusted accordingly. The technicians are a shared resource, but as much as possible, each technician should become familiar with a limited number of sites.

Once onsite there will always be what is called an “arm pull, please help me now” request that will interfere with the schedule. Technicians need to be held accountable for time—and coached on how to determine a quick fix and how to politely instruct the user to call support. Technicians traveling on a schedule site to site are much more efficient than a deployment based solely on the help-desk queue.

The next step is to have a technician available who can attempt to give online remote support to end users. A technician should only be deployed to a site off schedule when certain criteria are met such as the loss of network connectivity to the district office or a computer with a hardware issue. The use of readily available loaner computers and a 48-hour turn around on hardware issues assures everyone the sites are being supported.

Green technology also means taking responsibility for end-user PC power consumption. There is technology available now to control when a computer turns off and on. As with other network-based policy issues, you’ll want to achieve the goal of power saving while minimizing animosity towards the IT department. Having a policy that shuts down a teacher’s computer at a fixed time such as 6:00 p.m. without an option to add time or not shut off the machine will build animosity from the faculty. So choose power-control software that works, can demonstrate in reports what the savings are, and that it is not so strict as to cause users to manually restart computers or lose information in active memory.

Another area that is closer to home for the IT director is power consumption within the IT department. Virtualization is no longer cutting-edge technology. As you plan for server-hardware replacement, investigate how many servers can be replaced by virtualization. I recently observed 20 VM servers on one host computer running better than the 20 stand-alone servers it replaced. Depending on hardware, you should be able to realize between a 5:1 to 20:1 ratio of servers. Power savings will be nearly the same as the ratios.

In these financially strapped times for education, the most important thing is to be able to show a cost savings in a short period of time. The key is being able to demonstrate and plan ahead as you build budgets with your business departments. If you want to take “green technology” to the next level, chart your department’s use of carpooling, cycling, and public transportation and challenge the other departments in your district to match—another lesson learned from the Air Quality District. ■

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