GREENING YOUR AV

WHAT WORKS AND WHAT DOESN'T FOR END-USERS   by John Laughlin

Audiovisual system design is changing. As architects and owners look to more energy efficient, sustainable buildings, facility managers, IT managers and AV contractors must respond. At Conference Technologies, we see this as a very positive trend. Moving to greener AV systems can pay big dividends, for three important reasons:

1. AV systems are, in and of themselves, significant users of electric power.

2. The processors used to control audiovisual systems are powerful enough to control lighting, heating, shading and air conditioning systems as well. If you're already investing in a Crestron or AMX system, you may find you can greatly improve the efficiency of your building's environmental systems for a relatively low incremental cost.

3. The use of video conferencing and webcasting to minimize travel can be an important 'green' practice, saving tens of thousands of dollars and dramatically reducing your carbon footprint.

I'd like to make a few suggestions that may help you put things in perspective.

LOOK AT THE BIG PICTURE
No matter how much energy you can save within your AV systems, you can save a lot more if you focus first on lighting and HVAC.

For example, we were involved in a green project last year where the architect asked us to scrap the 3,000-lumen projector we initially recommended and install a 6,000-lumen unit. The problem was that the lower brightness projector would have worked well only if the room was lit and shaded to accommodate it.

In this case, the priority was to maximize natural daylight. The architect had

not planned to install a shading system, and so the cost of shading would have had to be added to the price of the smaller projector. The energy needed for extra lighting would also more than offset the power needed for the brighter projector, particularly since the shades would tend to stay down and the lights up even when the projector was in standby.

FOCUS ON POWER MANAGEMENT

Very often building designers tie their daylight harvesting systems to occupancy sensors, since researchers say these devices can save 50 percent or more on lighting costs. Audiovisual systems can be powered up and down in much the same way, producing similar savings. There are several workable strategies.

The most widely used method is to configure asset management software such as Crestron RoomView or AMX MeetingManager to check each system after hours and shut down any that are still running.

Another possibility is to tie AV controls into a scheduling package such as Outlook or Lotus Notes. With AMX or Crestron's scheduling solution, the user can ask the system to configure the room for the start of a meeting or class and automatically power down AV components when the session is over.

Often a simpler and less costly solution is to tie occupancy sensors to the AV controls. If the sensor detects no motion for some time period (usually 30 minutes), it sends a "System Off" signal to the control system.

A programmable power supply can be very helpful. You do not want to shut down every component. Control systems normally must stay on. Certain audio DSPs must stay on to function properly.

In addition, you can choose AV components that will shut down or partially shut down when inactive. For example, Energy Star amplifiers from Extron consume only one watt of AC while in standby, yet are instantly available when you speak into a microphone or start to play media that has an audio track. Certain projec-

tors can be set to go into standby after ten minutes or so without a signal. Switching to LED-based flat panels can also make a big difference, since they are at least 75 percent more energy efficient than plasma displays.

These three areas are priorities, since projectors, amplifiers, and displays are the biggest power users in most AV systems.

These strategies, of course, can be used in combination for maximum benefit.

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FOCUS ON TRAVEL REDUCTION

If you start to analyze the cost of travel within your organization, you may be surprised at the savings possible by substituting video or audio conferences for many meetings or web conferences for live training sessions.

One CTI customer, for example, found they could save about $30,000 annually in airline travel costs, plus more than 50 tons of carbon dioxide, by installing a single video conferencing room.

Some of our customers have applied for LEED innovative design credits for their video conferencing systems as well, arguing the energy savings of reduced travel.

DECIDE IF YOU'RE GOING FOR LEED CERTIFICATION

If you are applying for LEED certification, your AV systems can help in at least two additional areas. LEED credits are available for educating employees and visitors about sustainable practices, and some of our customers have used digital signage systems for this purpose.

In certain projects, choosing AV components—for example, loudspeakers—with a large recycled content can help. In our experience, this can apply mainly in buildings with large numbers of speakers for paging or background music.

WHAT DOESN'T WORK

It's important to note that many energy-related innovations can work only if you have the cooperation of your people.

For example, it's our experience that many video conferencing rooms never pay the premiums their owners expect, simply because they're difficult to use. Managers and staff find good excuses (and often good reasons) not to use electronic systems if they can't get good audio or video or can't routinely establish reliable connections with customers or branch offices. If you're going to build a video conferencing system, it's worth the extra money for a high-definition system with easy-to-use controls designed by an experienced AV integrator.

In the same way, power management systems, whether for the AV system or the entire building, must be automated, reliable and backed by a contractor who has a proven track record designing and maintaining these kinds of systems.

Greener AV systems do require an investment, but the return can be large for the organization and for the environment.

John Laughlin, CTS, is President and CEO of Conference Technologies, Inc., a provider of audio visual design, integration, video conferencing, rental solutions, and technical service support, with nine offices throughout the United States. Please contact CTI (http://www.conferencetech.com/contactform) to learn more about energy-saving AV.