CONCERNS ABOUT ENERGY efficiency, coupled with a growing awareness of climate change, have heightened interest in efficient lighting as an effective strategic venture for our country. Given the unprecedented investment directed at public entities for “efficiency opportunities” and the lack of a clear vision related to “what should be done,” there is mounting concern related to the ultimate value of this investment and the ability to achieve sustained and deep energy savings. What should we do to effect real change with this investment?

In a historical context, one can argue that we have made great progress. Successes include efficacy increases in core areas including common lamp-ballast systems, and the application of compact fluorescent lamps (CFLs) in commercial applications. However, we are missing many opportunities for effecting long-term change in how we use energy for lighting. For example, simple control strategies that reduce or turn off electric lighting during periods of vacancy are underutilized. One only needs to look at empty parking lots and structures during the late evening hours. Additionally, daylight harvesting strategies, which have been routinely demonstrated to save 40 percent to 50 percent, are rarely found in today’s buildings. And as a glaring example, the “real” market penetration of CFLs in America’s homes is, at best, 15 percent in spite of years of “leadership.” The sad reality is that even the simplest opportunities for energy-saving lighting are not aggressively pursued, nor is there any well-thought-out national program for systematically retrofitting all of America’s public buildings.

Within the lighting and energy-efficiency community, there is a growing consensus that a national plan is needed, with specific and aggressive goals developed in partnership with industry stakeholders. Specific elements of such a plan include the following five points:

- **MANDATE THE IMMEDIATE RETROFIT OF ALL PUBLIC BUILDINGS IN THE UNITED STATES.**

  We need to fund the immediate retrofit of all public buildings (municipal, state and federal, including schools, colleges and universities) with the most efficient technologies and best-practice solutions (i.e., proven energy savings) that the industry has to offer. The technologies are available to begin implementation, and it is the most cost-effective activity that the government could do to save energy. This national relighting effort would send a message to the industry, establishing one of the largest near-term business opportunities.

- **ESTABLISH REAL AND MEASURABLE GOALS.**

  Identify clear and unambiguous targets that need to be achieved for lighting energy use reductions. These need to be technology-neutral, with defined goals in measurable, non abstract terms, to be achieved by a specific date. Link goals with budgets to achieve expectations, as would any private business.

- **IDENTIFY AND DEVELOP BEST PRACTICES.**

  Support these major lighting retrofits by identifying simple, straightforward technology and best-practice solutions that are useful to facility managers. Best practices should include a broad portfolio of technology-neutral approaches, including lighting controls for all spaces, daylight-harvesting, task lighting, high-performance downlighting, and bi-level controls for exterior lighting. Technologies selection should not focus solely on LEDs, but include a variety of sources.
SUPPORT LONG-TERM THINKING FOR RETROFIT APPROACHES.

Too often, simple paybacks drive decisions and trap enormous savings. This is currently an urgent issue. The federal investment in public infrastructure should be focused on the deepest and most sustained energy-saving approaches today, as opposed to short-term payback opportunities. These decisions should be based only on lifecycle costing, which, unfortunately, is a rare part of the national lexicon.

TRAIN INSTALLERS AND CONTRACTORS.

The ultimate success of any energy-efficient lighting technology is highly dependent on whether the system was properly installed to begin with. Educating contractors is critical if this country is to achieve significant energy savings. Furthermore, electrical contractors represent an excellent opportunity to extend the message of energy efficiency to a broad marketplace and are, therefore, one of the best long-term investments for sustained energy savings in this country.

We have a unique opportunity to transform our public building stock lighting into sustainable, high-efficiency lighting, representing one of the largest business opportunities for our lighting industry. This effort will require immediate leadership and should begin with a plan linking public investment to real energy savings.

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