Seeing The Light

National Energy Policy Act Will Lower Tenant Operating Costs, Save Energy

By Craig R. Sieben and A. Gail Sturm

Office buildings across the nation are being put on a mandatory energy-use reduction diet, which will lead to lower facility operating expenses and generate big savings. The Energy Policy Act of 1992 (EPACT 92) was passed by Congress to upgrade the efficiency of new and existing buildings. The new standards were set so that the vast majority of equipment purchasers save money on a life-cycle basis. Many EPACT 92 provisions go into effect in 1994, and facility users, brokers and managers need to know the details to avoid missteps and take advantage of emerging opportunities.

EPACT 92 sets minimum energy standards for new buildings throughout the nation. It bans the production and sale of some inefficient lighting and motor technologies. Also affected are commercial HVAC equipment, motors, refrigerators, shower heads and office equipment. Existing technologies for all of these have been substantially improved, and the current generation offers greater operating cost savings, flexibility, durability and performance. By banning the manufacture of certain items, and establishing minimum performance criteria for others, the government is increasing the rate at which new technologies and practices will be adopted. This is good news for the real estate industry and is an important component of our nation's economic competitiveness and vitality.

Fluorescent Lighting

The standard 40-watt cool white and warm white fluorescent lamps, which are used extensively in offices, will no longer be manufactured after October 31, 1995. Brokers and their tenants who are seeking to move or renew leases should make sure that lease provisions provide for disposition of these lamps.

The easiest, though not the best, solution is to substitute with higher color rendering 40-w lamps or "energy saving" 34-w lamps. These, ironically, are no more efficient than the standard 40-w lamps. They just use fewer watts and produce less light.

A superior alternative is to use 32-w T8's (T8 lamps are 1" in diameter, as opposed to the standard T12 lamps, which are 1-1/2" in diameter). T8 lamps produce the same amount of light and have better color rendering qualities than the standard 40-w lamps. The lamps cost just a little more, and use "rare earth phosphors" developed for and used in color TV. The improvement in color is striking, enhancing furnishings, complexions and mood.

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There is a catch, however. The T8 lamps can't be used with older ballast technology and specifications must include ballasts that work with the lamps. Electronic ballasts offer the greatest efficiency, and their use lowers wattage by 30% vs. standard 40-w lamps and delivers the same light output with better quality.

The most commonly used eight-foot fluorescent 75-w Slimline lamps will no longer be manufactured after April 30, 1994. As with the 40-w lamps, they can be replaced with higher color rendering 75w lamps or with 60-w "energy-saver" lamps. The most effective upgrade is to use eight-foot T8 lamps with electronic ballasts.

Incandescent Lighting

For incandescent lighting, commonly used flood and PAR lamps will no longer be manufactured after October 31, 1995. They can generally be replaced by tungsten halogen lamps and sometimes by compact fluorescents. When specifying new fixtures, tungsten halogen and compact fluorescents are recommended. If modifying an existing fixture, the design of the fixture will help determine which replacement will work. Careful application and design engineering is recommended to establish specifications that will deliver the desired lighting quality, be easy to maintain, and produce energy savings.

Commercial HVAC Equipment

EPACT 92 establishes standards for certain types of air conditioning systems, heat pumps, boilers, furnaces, and water heaters. Real estate professionals and tenants should be sure to specify that the ASHRAE 90.1-1989 standards be met.

Large air conditioning systems, known as chillers, and unitary systems greater than 20 tons in cooling capacity are excluded from EPACT 92. Manufacturers successfully argued that these machines are custom-designed and site-assembled rather than mass-produced, and were therefore excluded from the standard. However, significant opportunities exist to improve the efficiency and performance of most chillers.

It may be possible to reduce internal building loads, such as heat loads due to lighting. Reducing internal loads may permit chiller downsizing. Many facilities are scheduled for chiller retrofits because of the December 1995 CFC phaseout of R-11 and R-12 refrigerants. When retrofitting, it is possible to improve chiller efficiency by about 20% if the chiller load can be decreased by about 25%. The opportunity here is to use the money savings from energy efficiency upgrades to help offset the cost of the chiller retrofit.

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Practical Tips for Brokers and Tenants

Tenant-rep broker can raise issues related to EPACT 92 and energy efficiency in order to structure a transaction that will benefit the client's bottom line by saving money. The lease can and should be structured so that both landlord and tenant benefit from the investment in energy efficiency. Otherwise, one finds a split incentive. Why should the landlord make the capital investment if the tenant receives all the savings?

Leasing brokers' standard professional practice should be amended so that actual energy costs — when available by measurement or (for new properties) by engineering calculation -- shall be used in spreadsheets for prospective tenants. Most brokers today are willing to settle for nonempirical, "rule-of-thumb" energy costs. Therefore, efficient buildings get no credit and cannot attract proper market value, while inefficient buildings are not appropriately penalized.

Prospective tenants are entitled to receive prior energy billing data just like any other normal disclosures by the owner.

Prospective Tenants

Prospective tenants should ask questions about EPACT 92 when discussing a new lease. When building out space, be sure to ask your designer, contractor and building manager about using energy-efficient equipment. You might be surprised to see savings of $.30 to $.50 per square foot per year with an efficient lighting system alone. If taking existing space as-is, explore provisions for upgrading the lighting, even if you will only be in the location for two years or less.

Renewing Tenants

Tenants considering a renewal should explore whether you can negotiate a lighting upgrade in your space as part of your new lease. Ask what plans management has to improve energy efficiency throughout the building. If they have to upgrade the HVAC system, your willingness to improve lighting efficiency could help lower air conditioning loads. By working with the landlord to lower operating costs in your own space you will also help lower costs throughout the facility. ▲

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