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Local building codes and energy conservation

Energy is one of the most talked about and written about subjects in the United States today. Preceding the infamous Arab oil embargo in the winter of 1973–1974, legislators, government, and business leaders considered energy as just one entry in the account ledger. The oil embargo was the catalyst for a whole new era in national and local legislative direction, and as on so many issues, the federal government moved first—logically, because the shortage of fuel appeared to be a national issue.

The energy dilemma is, indeed, a national issue. With the continuance of the present situation, the United States will be unable to defend itself in a major international confrontation and could be diminished to a secondary place on the world trade market with proper well-placed pressures from the oil-producing nations. It is in recognition of this that the federal government has moved quickly (and clumsily) into attempting to solve the energy problem.

Energy is regional commodity

The potential impact on local and regional commerce, unfortunately, has not been widely recognized by political leaders, although energy is a highly regional commodity. Historically, communities grew and prospered where there were raw materials, water, and other available modes of transportation. Where these three commodities were not available, there was nothing to sustain a community or community life. The amount of energy required was relatively small and generally readily available at nominal costs.

The growth of our cities and industries has, since the era of the Second World War, been

based on the assumption of a continued availability of those depleting energy resources. This dependency moves energy availability into the cornerstone position of continued local prosperity (if not even survival). That is, the municipality that does not have the energy available will certainly not survive, and will yield its place in the marketplace and living environment to the community or region that has the energy resources!

If this proposition is accepted, then, the energy dilemma must be addressed as a local problem, deserving of solutions by local political bodies.

Energy supply limited

Since there is little that can be done by municipal agencies to increase the local supply or availability of energy reserves, the emphasis should be on gaining maximum benefit from those energy sources that *are* available. This is the concept of conservation.

Since energy was a readily available, relatively inexpensive commodity for many years, our society, including the business and engineering communities, did not consider energy economics in the design and production of energy-consuming products (a situation that was even encouraged by some energy industries). Furthermore, community planning in most cases was counterproductive to any efforts at energy economy. This resulted in the sprawling trend to suburbia that virtually negates any effective mass transit systems in our major metropolitan areas. Recognition of the areas of excessive use resulting from these past practices is the key to energy conservation.

The three major areas of energy consump-

tion are buildings, transportation, and industrial processes. Each represents approximately one-third of the total national consumption. Again, to confirm the earlier observation that energy is a regional issue, the mix will vary with the region or municipality.

Include conservation in codes

All participants in municipal government recognize that buildings are probably the most universal component of municipalities (i.e., they all have buildings). Furthermore, most municipalities have building codes. It is thus in the area of buildings that municipalities can and should concentrate their initial efforts at energy conservation policies or legislation.

As many municipal governmental bodies have recognized, the concept of locally developed codes, ignoring the need for compatibility with other areas or a certain element of universality, has resulted in restrictive practices leading to adverse economic impact on the community as a whole. This recognition has resulted in most municipalities adopting nationally accepted building codes (such as BOCA or ICBO) drafted into ordinance with exceptions or supplements addressing local conditions.

Consider accepted standards

Thus, in the consideration of energy conservation ordinances or legislation, some nationally accepted guideline or standards should be considered.

ASHRAE Standard 90 "Energy Conservation in New Building Design," is a nationally recognized standard. It is available today and could be incorporated into an ordinance by municipal governments or state legislatures. If the building code vehicle is used, the responsibility in most states will fall to the municipalities, since the majority of states have opted to leave building code legislation and regulation to local or municipal governments. The standard could be adopted for use by the municipalities themselves in their own municipal buildings and could be extended into all private sector buildings in whatever method best serves the dictates of the region.

Many code administrators have expressed concern over additional work loads created if review for compliance were added to their already overwhelming work load. Well-designed legislation, however, could avoid this problem by such techniques as simple certification of compliance by the legally responsible building designer and filing with the code agency a record of anticipated annual consumption by the building.

If the municipalities do not recognize their responsibilities to address the energy dilemma in at least this minimal degree, the void will inevitably be filled by the state or the federal government. Such efforts on the part of the federal government are already well under way, and only quick action on the part of local governments will allow them to retain local control of the local components of this truly national problem.