
C i v a n o  N e i g h b o r s

Mr. James R. Keene
City Manager
City of Tucson
255 West Alameda, 10th Floor
P.O. Box 27210
Tucson, Arizona 85726-7210

April 24, 2003

Dear Mr. Keene:

The Civano Neighbors neighborhood association strongly encourages you to forward the attached, amended Sustainable Energy Standards to the Building Code Committee for review and adoption. As the Civano project moves forward there have been suggestions for some minor adjustments to keep the project current with today's technology. Specifically, some of the energy issues are as follows:

1. The currently stipulated air conditioners and heat pumps are using refrigerants that are to be abandoned because of their ozone depletion factor. The new refrigerants available today have no adverse effect on the ozone layer and also happen to be more energy-efficient. Units built using this refrigerant have a very high success rate in the field and major manufactures are now mass producing these units and will soon phase out the current models. It is therefore wise and prudent to specify use of the non-ozone depleting refrigerant in Civano Neighborhoods II and III.
2. Passive water heaters have worked well in Neighborhood I, providing 50-60 percent of the water heating needs. There are many providers of solar water heaters that have rugged systems and a long field history. Some problems with one particular manufacturer are being resolved and should in no way suggest fault with the entire solar water heating industry. It may be surprising to some that water heating costs can be as much or more per year than heating the home. There are several manufacturers of active solar water heating systems that can easily provide more than 75 percent of the water heating needs and at a much higher reliability. Without solar water heating in Neighborhoods II and III, it is likely that the Civano energy standard will not be met.

Finally, Civano has been defined as: "A Tucson Solar Village, a model sustainable community; a vision of the future where resource consumption is reduced through more efficient technologies, use of solar energy ...". In essence, the use of natural resources to reduce energy needs defines this project. Hence, to abandon the use of solar energy in Neighborhoods II and III would also abandon the energy standards that are being used by other builders and gaining broader use, as is the vision of Civano.

Attached are suggested amendments to the Sustainable Energy Standard for submittal to the Building Code Committee for review and adoption. Your support is greatly appreciated.

Sincerely,

Simmons B. Buntin
Association Spokesperson
Civano Neighbors

Attachment: Recommended Changes in the Sustainable Energy Standard

Cc:

Vice Mayor Shirley Scott, Southeast Ward Four
Benny Young, Assistant City Manager
Hector F. Martinez, Comprehensive Planning Task Force
Michael W. McCrory, Esq., City Attorney's Office
Judith L. Kilroy, Project Manager, Community of Civano, LLC

Attachment: Recommended Changes in the Sustainable Energy Standard

SUSTAINABLE ENERGY STANDARD 4/22/98

The following modifications to the CABO Model Energy Code, 1995 Edition are deemed to be a sustainable standard:

[Editorial Note: This Energy Standard was reviewed by the Tucson/Pima County Building Code Committee and is regionally specific to the Tucson Metro area.]

CHAPTER 1 ADMINISTRATION AND ENFORCEMENT

102.4 Equipment. Residential buildings constructed under the provisions of this standard shall be permitted to use refrigerated air conditioning systems using non-ozone depleting refrigerants selected under the guidelines of the Air Conditioning Contractors of America (ACCA) Manual J Procedures, Specifically Sections 7- 27, 7-28 and 7-29 at outside conditions of 105 degrees F and inside conditions of 75 degrees F. Other provisions of this standard notwithstanding, air conditioning equipment shall have a minimum SEER of 13.

Evaporative cooling is encouraged for cooling or to reduce air conditioning requirements but may not be used as the method of compliance to this standard except for commercial buildings that use evaporative cooling as an economizer cycle on a refrigeration or air conditioning application. Duct leakage through the evaporative device must be minimized during air conditioning and heating modes of operation. Separate duct systems or whole house ductless ventilation is recommended.

Examples of water heating systems demonstrating compliance are listed here:

- Active solar water heaters with a minimum 75% average fraction with back up in the storage tank.
- Passive Solar water heaters with one of the following as backup:
 - Instant electric or gas water heaters with electronic ignition.
 - Heat pump electric water heaters.
 - Heat recovery water heaters from air conditioning or other sources.
 - Gas water heaters exceeding 90% efficiency (condensing types)

CHAPTER 2 DEFINITIONS REAFFIRM

201.1 Application of Terms. Civano: A Tucson Solar Village, a model sustainable community; a vision of the future where resource consumption is reduced through more efficient technologies, use of solar energy and lifestyles which promote greater harmony and balance with the natural environment; a community in the spirit of the "Civano" period, a golden era of the Hohokam culture that balanced natural resources and human needs; incorporates and demonstrates strategies for achieving more sustainable development.

CHAPTER 5 RESIDENTIAL BUILDING DESIGN BY COMPONENT PERFORMANCE APPROACH

Section 502.3.4 Recessed lighting fixtures. Revise the first paragraph to read:

503.2.4 Recessed lighting fixtures. When installed in the building envelope, recessed lighting fixtures shall be constructed so as to accept only lamps with efficacy greater than 40 lumens watt, and meet one of the following requirements:

ADD: Outdoor lighting on the home or garage shall be with efficacy greater than 40 lumens/watt with photo sensors