American Solar Energy Society
Arizona Solar Energy Association (ASEA)
Sedona/Verde Valley Chapter
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NEWS RELEASE

LIVING WITH THE SUN - ARIZONA STYLE

Solar - Sustainable - Green Homes tour in the Verde Valley Saturday October 21

On Saturday, October 21st, Sedona and the Verde Valley will be taking part in the 11th annual American Solar Energy Society's (ASES) National Solar Tour. The Verde Valley tour is from 10am-4pm. The homes will be divided into two time groups, 10-1 and 1-4. Participants in the Sedona and Verde Valley tours not only get a close look at the homes, but will also meet the builders and talk with the owners. During this event thousands of solar-powered, green design, and sustainable homes and buildings in 44 states will be open for public tours. The National Solar Tour offers Americans an opportunity to see how their neighbors are putting reliable solar power and other energy efficient technologies to work. Interest in solar power has increased dramatically in the wake of escalating fuel costs, devastating weather, and growing concerns over energy security.

In recognition of increased demand for information about alternate energy and building practices, Governor Napolitano has declared October as "Arizona Solar, Renewable Energy and Sustainability Month." Accordingly, the Arizona Solar Energy Association (ASEA) is hosting solar tours across the state every weekend of the month. This year's focus is "Living with the Sun- Arizona Style," and will feature practical ways to take advantage of Arizona's abundant sunlight. The benefits of solar power are clear. First, sunlight is limitless, and Arizona receives almost year-round sunshine. Second, solar generators can operate independently of a large electrical grid, making them good choices for people in remote areas, and providing a measure of security. "One central facility is an easy target," says Martin Pasqualetti. "If there are 10,000 solar sites out there, terrorists aren't as attracted to them." Of course, solar energy is also environmentally sound, producing no pollutants, no noise and needing no transmission lines. There will be tours every weekend in October throughout the State. For more information on this state-wide event, please visit www.azsolarcenter.com.

Among this years homes will be a dome home completely off the grid. This home is not hooked to any utilities, deriving all its power from the sun and wind. A rammed earth home, with beautiful red earthen wall construction, that is both pleasing to look at, and comfortable year round. Two new homes using some of the *latest* technologies: SIPS panels, PV- water heating hybrid, rastra blocks, green building materials and paints, and more. A straw-bale home that is unique in its creative minimalism.

Debuting on the tour this year is a newly built home featuring the latest technologies in green, sustainable construction. Though it is tied to the grid, its 7.8 KW photovoltaic system is large enough to live a modern lifestyle without *any* electricity from APS. The system consists of 60 solar panels. The suns energy is converted into electricity that is stored in 56 batteries to power the home after the sun has set. The walls are constructed of highly insulated SIPS panels and Rastra block. The high "R" value from these innovative walls means less power to heat and cool the home, saving money and the environment. The home captures gray water for reuse and irrigating the landscaping. The floors are bamboo, a new arrival on the sustainable scene. The wood grows quickly on farms for use in construction, eliminating the old practice of clear-cutting forests for our wood. The PET carpets are made from recycled plastic, the FSC doors come from managed forests, and the home is illuminated by extensive natural lighting and compact fluorescent bulbs.

Also on tour this year is a 2600 sq. foot home that is best described as "poured earth" construction. The walls are 20 inches thick and consist of 30% each of earth, red ash and sand and an additional 10% of Portland cement. Within the outer walls is 4 inches of foam that serves as a thermal break between the inner and outer walls. The floors are stained concrete, and combined with the walls, provide a total of 150 tons of thermal mass. The south walls is almost all glass and together with the high clerestory windows, supply abundant heat on sunny, cool, winter days. The home also features a solar hot water system and in the future, will be adding solar photovoltaics. All windows are double-paned and have insulated shades inside. Almost all of the lighting is florescent.

A demonstration home built by Architectural and Environmental Associates will be on tour as well. Besides viewing this home, people can stop by and also see slides and gather information about solar, wind turbines, green design and construction and water catchment systems. The compact design of this home provides space needed but minimizes overall size of house. This is green sustainable design. It saves energy to heat and cool and saves money to build due to its modest size. The all plywood construction in the house and cabinets helps reduce VOC's (volatile organic compounds) and chemical off-gassing such as formaldehyde. All hard surface floors reduce dust, bacteria, mold, mites, chemicals and other environmental chemicals in the house. Sealed fireplace unit with circulating heat and remote control, prevents contaminates from entering the house. The garage is finished with R25 insulation in walls, R30 in ceiling and durable finished floor. A central vacuum system, which exhausts contaminates to the outside, and the special kick base in the kitchen provide for easy cleaning. Operable clerestory windows provide a draft cooling effect and makes use of loft space for additional living area. Light and airy design with passive solar clerestory windows and large stone Trombe wall, along with stone countertops, concrete and clay tile floors provide thermal mass. Upgraded heating and cooling system with HEPA and UV light filtration unit, wall detector and separate control for humidification, and electronic filter. All these features which provide better Indoor Air Quality and better human comfort and health. Upgraded attic ventilation with radiant heat reflective foil on entire roof, R35 roof construction helps save energy and keeps the house comfortable. Low E value insulated windows on south wall helps reduce heat gain. Low or no chemical construction used throughout the home. Alternatives such as environmentally friendly boric acid sill plate treatment were used .Interior walls insulated for sound deadening and also to add additional mass to the home adding to the energy savings. Eco-aquatic balanced waterfall and pond minimizes water usage while providing a pleasant human experience. Cement stucco exterior for low

maintenance with aluminum clad thermo-insulated windows for low maintenance and energy savings. Through-wall flashing used to help eliminate moisture collection in exterior wall and prevent wood deterioration, mold, bacteria and other moisture problems. Dry wall helps insulate and save energy. Active 2.4 kilowatt photovoltaic grid tied solar system, provides electricity for the house, and the opportunity to sell excess electric power to APS. This provides a non-polluting energy source that is completely renewable, saves energy, and ties down energy costs to the present day cost without future inflation of cost. Underground roof water drainage system and underground plumbing installed for future water reclamation catchment system. 2 x 6 wall construction with R25 insulation, and vapor barrier on the interior of the wall helps save energy and helps prevent moisture, mold, and bacteria problems. All concrete floors insulated with Dow "blue board" with thermal break insulation at exterior foundation walls for warm floors and additional thermal mass which saves energy. Upgraded attic ventilation with radiant heat reflective foil on entire roof and R35 roof construction helps save energy and keep house comfortable.

For those that want simple and modest,"Casa Bonita" takes the minimalist approach to saving money on energy and preserving our natural resources. This properly sized home was built using 3-D or Tridi-panel system (EPS Core with Wire Mesh Faces), with a 1.5" concrete gunite finish on each side. The panel was used for the roof as well. This is a 1-bedroom cottage with evaporative cooler; earthquake and fireproof...snug as a bug!

A long time fixture on the Sedona "green" scene is Mason's off-grid dome home. The dome was built in the 80's near Boynton Pass when there were no utilities available. We caught up with Mason recently, as he described life "in a dome". He has lived in one for about 17 years in Sedona, near the Palatki ruins. His home is solar and wind powered. It also has passive energy systems that use available natural conditions such as sunlight and wind to warm or cool the living environment. "This is the ultimate passive design," he said. "You don't need air conditioning, even here in Arizona. If they would build this way, they wouldn't need the air conditioning that's 50 percent of the energy consumption in his country." A shot-crete dome like his is made by spraying a concrete foam material over a giant inflated balloon. It is quick to build and relatively inexpensive and can be made in three days for about $30 per foot. "It's like a pool, only upside down," he explained. "The fourth little piggy would have lived in a masonry dome. A dome uses a third less materials. These particular domes can save from 60 to 80 percent on your cooling and heating bills."

The tour is free and there are no reservations. To take this self-guided tour, download a guidebook from www.azsolarcenter.com. Printed versions will be available at New Frontiers in Sedona and Mount Hope Foods in Cottonwood, but participants are urged to print their own online. The guidebook includes everything necessary to plan an itinerary, including resource information, site descriptions and maps. For more information about this tour, contact Bill Buckner at 203-1018, Ron Mohney at 282-9146, or email Bill at BillBuckner@SedonaRealEstateSolutions.com.

Attendance to the National Solar Tour has grown substantially in recent years, attracting tens of thousands of visitors. Many who learn about solar power during the tour go on to install solar and other energy efficient technologies in their own homes and businesses.

The Arizona Solar Energy Association (ASEA) is the Arizona chapter of the American Solar Energy Society (ASES). The Sedona chapter of ASEA consists of a group of individuals interested in solar and other renewable energy forms and environmentally compatible living in general. Public meetings are held at 7:15PM on the 4th Wednesday of each month (note: no meetings are scheduled for November or December) at the Sedona Winds Retirement Home on Jacks Canyon Rd in the Village of Oak Creek. The format is a presentation by an expert guest speaker followed by a question and answer session, all of which lasts about two hours. Several members are experts in the various areas of alternate energy and earth-friendly home design and construction. They can help answer your questions and are open to informal discussions. Meetings are free and you need not join or call in advance to attend. For more information, or to get on the mailing list, contact Bill Buckner.

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Note to Editors: Many of the people with buildings on the National Solar Tour are willing to open their homes to media for tours prior to the public open house. Please contact your local organizer, *Bill Buckner* to make arrangements.