

# The state of green in 'America's Finest City'

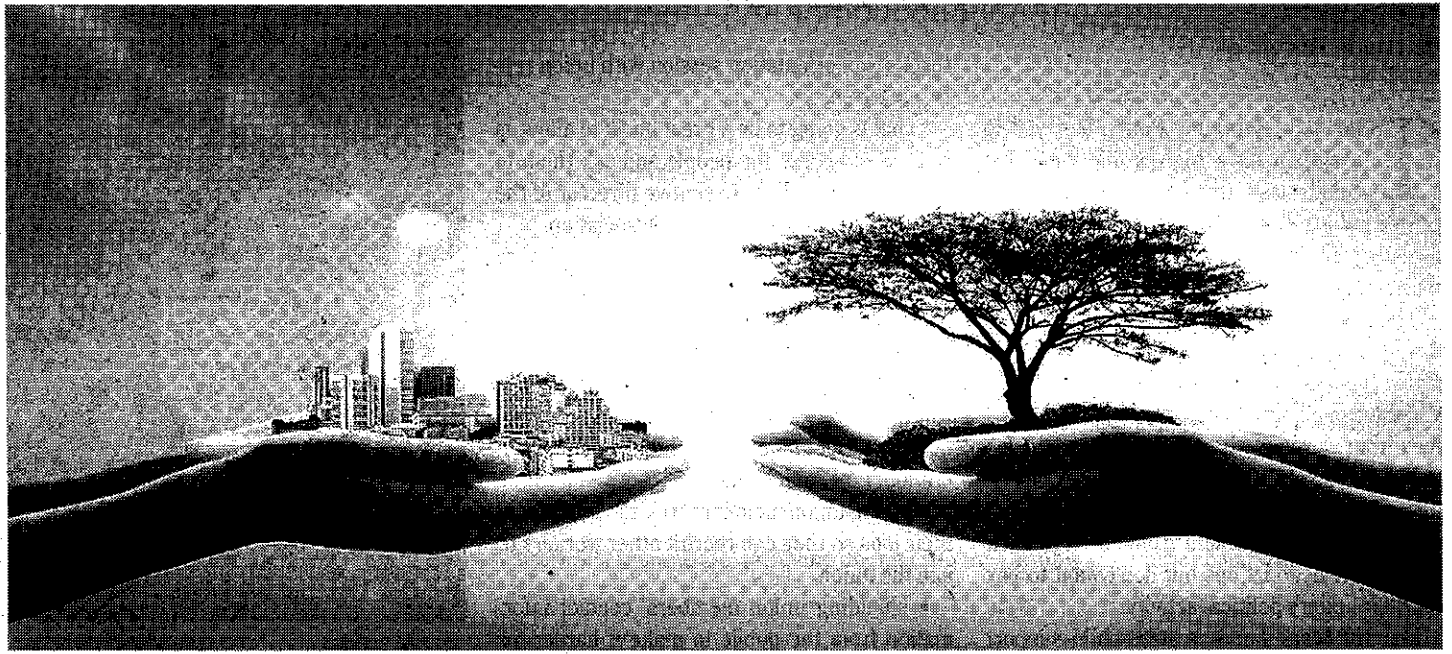
By Steven Shinn

We are living with over 7.6 billion people on our planet. Climate change is happening and every major ecological system is in decline. These are a few of the facts continuing to drive the sustainability movement since the 1960's. The definition of green (sustainability) was recently refined by the American Institute of Architects (AIA) Committee on the Environment (COTE). The committee updated the Top Ten Measures of Sustainability to focus on design that includes community, ecology, water, energy, wellness, resources and other attributes. The goal is to enhance the convergence of design and performance in the built environment. To evaluate the state of the green movement locally, we need to consider national and state impacts.

## Legislating sustainability

In 2006, the California Legislature declared that global warming poses a serious threat to the economic well-being, public health, natural resources and environment of the state. As a result, the California Global Warming Solutions Act (AB32) was passed. It required a sharp reduction of greenhouse gas emissions for the state and the development of state and local Climate Action Plans (CAPs). CAPs are comprehensive roadmaps that outline specific activities to reduce greenhouse gas emissions. The updated City of San Diego 2015 Climate Action Plan focuses on energy and water efficiency, clean and renewable energy, and zero waste. It calls for eliminating half of all greenhouse gas emissions in the City and aims for all electricity used in the city to be from renewable sources by 2035.

California's first building energy efficiency standards went into effect in 1978. In 2008, California developed ambitious goals and created Title 24 of the California Building Code



Shutterstock

Most San Diego design firms and their clients are taking a back seat in the sustainability movement. Many professional organizations and non-profits are advocating and promoting green initiatives, while legislators in Sacramento are driving the movement.

which focuses on reducing energy from lighting, heating, cooling, and ventilation. The goals include Zero Net Energy (ZNE) for new homes by 2020 and commercial buildings by 2030. The goals will require projects to integrate improved efficiency and renewable energy to meet 100% of their annual energy needs.

The California Green Building Standards Code (CALGreen Code) was created in 2007 and it emphasizes public health, and sustainable construction practices focused on energy and water efficiency, material conservation and environmental quality. Title 24 and CALGreen impact all new design and construction. They continue to get updated to raise the bar on a regular basis. They are driving the sustainability movement in California and San Diego.

## Advocating sustainability

Numerous organizations advocate and promote the importance of sustainability and work to raise the bar beyond code mandated minimums. The National AIA COTE promotes the Top Ten Awards which focus on design excellence and technical/environmental performance through the Top Ten Measures of Sustainable Design. During the past 10 years there have been 100 award winners. In California, twenty four projects received the prestigious honor, including three in San Diego. One example is the UCSD Charles David Keeling Apartments. The award winning projects are impressive, but the number of submissions is a very small percentage of the total projects completed every year in the US.

The National AIA2030 Challenge calls for all new buildings, developments and major renovations to be carbon neutral by 2030. Over 400 architectural firms are participating. The reported building projects are averaging a 42%

energy savings, but the current target is 70%. Although 73% of the 20 largest architecture/engineering firms are participating in the 2030 Challenge, another 20,000 firms in the US are not sharing their project data. In San Diego County, only ten of several hundred firms are signatories and participating in this program to raise the bar for sustainability.

The US Green Building Council was established in 1993 with a mission to promote sustainability focused practices in the building industry. It developed a green certification program called Leadership in Energy and Environmental Design (LEED). The LEED framework focuses on technical performance. In San Diego, over 1,500 building projects have been registered with LEED and over 700 have been certified. Half of the LEED certified projects are for our local cities, county, non-profits, public colleges and universities. The SDSU Aztec Student Union recently received LEED Platinum certification. The public sector as a percent of local projects is far ahead of the private sector in registering projects and promoting sustainable performance beyond building codes. LPL Financial received LEED Platinum for their new office building and only a few companies including Alexandria Real Estate Equities Inc are seeking LEED certification for all new development projects.

In 2006, the Living Building Challenge created the most rigorous performance standard for buildings. It focuses on regenerative buildings with performance requirements that include zero net energy, water and waste. In San Diego we have one Living Building Challenge Net Zero Energy Certified project which is the DPR Construction Office. The WELL Building Standard was launched in 2013. It promotes human health and wellness and lo-

cally, we have six registered WELL buildings. The Gensler Studio is pursuing WELL Gold and LEED Platinum.

The growth of projects pursuing these performance based rating systems is encouraging until you realize the San Diego Building Department had over 10,000 permits issued in just 2017. Clearly, most of the San Diego design community and their clients are relying primarily on legislation and codes to drive the sustainability agenda. Fortunately, California is doing a great job compared to most other states.

## Building a more sustainable future

California must continue to raise the building code requirements and professional organizations / non-profits must enhance advocacy for sustainability in the building industry. In the local AIA San Diego design awards program during the last three years, the number of winning projects with a strong sustainable focus has increased from 50% to 70%. This year, AIASD will require all submissions to have a strong ecological message. Great work must promote both good design and environmental performance.

Ultimately design professionals and clients should campaign more for the benefits of sustainability including cost savings, consumer demand, risk mitigation, leadership, employee health and retention. More architects should lead the green movement and use creativity and innovation to promote design founded on sustainable principles.

**Steven Shinn, AIA, LEED AP BD+C, WELL AP, is Senior Associate, Studio Director in the San Diego office of Gensler, an integrated architecture, design, planning and consulting firm.**



**STEVEN SHINN**