

Cleantech's \$6.8 billion impact on San Diego economy

By Jason Anderson

Cleantech San Diego turns 10 this year. Our organization was founded in 2007 thanks to gutsy and visionary leaders from the private, public, and academic sectors who recognized a growing cleantech industry as the next great economic opportunity for the San Diego region. They were guided by the premise that sustainable business practices are viable only if they make financial sense.

Today, we are seeing that vision materialize in ways we couldn't have imagined a decade ago. Sensors are helping building managers make smart energy and water choices. Electric vehicles are cool and affordable. Storing renewable energy has become a larger question than how to generate it. And more than ever, governing bodies are setting clear and aggressive goals for greenhouse gas reductions that help drive the cleantech market in our region and beyond.

Since our founding ten years ago, the San Diego region has shown incredible flexibility

for solar installations with more than 93,500 rooftop systems. We are home to more than 22,000 electric vehicles (EV) and 1,100 public charging stations in 400 locations. A recent study commissioned by Cleantech San Diego finds there are more than 3,000 cleantech businesses in the San Diego region, creating 38,000 jobs with an economic impact of \$6.8 billion. For comparison, when the City of San Diego conducted a similar study 10 years ago, we could only identify 125 cleantech businesses in the region.

This growth is also reflected in the makeup of Cleantech San Diego's membership, which includes more than 110 businesses, universities, governments, and nonprofits committed to advancing sustainable solutions for benefit of the economy and the environment.

Together with our members, we have spearheaded a number of exciting projects and initiatives that have helped solidify our region's position as a global leader in the cleantech economy and will support its growth for years to come.

San Diego's cleantech industry has grown exponentially over the past decade, from 125 businesses in the region to more than 3,000.

in the face of an ever-evolving industry and continued to prove itself as a strong leader in the cleantech economy and smart cities movement.

We currently rank #3 in the nation for cleantech leadership. We are #2 in the nation



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Through our K-12 Schools Sustainability Strategy Collaborative, over the past three years \$75 million in Clean Energy Jobs Act (Proposition 39) funding has been granted to San Diego schools for energy efficiency upgrades that will result in nearly \$6 million in annual energy cost savings and 27 million kWh in annual electricity savings.

Under our San Diego Regional Streetlight Working Group, 75,000 LED streetlight retrofits were deployed across San Diego County that resulted in 30 million kWh in annual energy savings, 12,700 metric tons of carbon dioxide eliminated, \$30 million in economic development, and \$4 million in annual taxpayer savings.

We have seen our Smart Cities San Diego initiative gain significant traction in recent years by facilitating the deployment of exciting new technologies that are saving energy, water, and money at landmark locations like the City of San Diego, the Port of San Diego, the City of Chula Vista, the San Diego International Airport, the City of Solana Beach, and at PETCO Park.

These high-profile cleantech deployments have done a great deal to advance the San Diego region's position as a global smart city



Image courtesy of Cleantech San Diego

Cleantech San Diego supports the growth of the region's solar, wind, storage, energy efficiency, electric vehicle and water markets.

leader. They have brought increased attention to the region and have created a vibrant test bed for cleantech business solutions. Of course in 2015 we were very proud that San Diego was chosen as the only U.S. city to be profiled in National Geographic Channel's World's "Smart Cities" series. And the work continues. Just last week Cleantech San Diego and Mayor Kevin Faulconer announced our intent to form a 2030 District to bring together the private sector and local tech to create a district of sustainable buildings to support the city of San Diego's Climate Action Plan.

On the transportation side of things, the Solar-to-EV project launched by Smart Cities San Diego in 2012 is one of the first of its kind in the world. The charging stations use energy from the sun to directly charge plug-in electric vehicles, store solar power for future use, and provide renewable energy to the surrounding community. Usage data collected at the charging stations over the years show a steady increase in electricity consumed, the number of cars using the stations, and how often the stations are in use. This and all of our Smart Cities San Diego projects are designed to be scalable and replicable, both within our region and in other cities.

Our newest electric vehicle initiative, EV Forward is an informational website and video that promotes the fun and benefits of an EV lifestyle in San Diego with the goal of getting more San Diegans behind the wheel of EVs.

Cleantech San Diego is also engaging the startup community to help secure the future of the region's cleantech economy and to continue to attract investment. Most notably, in 2016 we were awarded a \$5 million grant from the California Energy Commission to help energy entrepreneurs bring their innovations to mar-

ket with support from ten regional partners through the new San Diego Regional Energy Innovation Cluster. This grant has the potential to transform the San Diego region's ability to foster bright cleantech innovators with breakthrough technologies that will benefit our energy future. Only a few months into the program, we already have interest from 40 energy entrepreneurs and are starting them down the path to help accelerate their technology development.

Other programs introduced last year expanded the cleantech industry's reach into the college/career preparation and healthcare sectors. And we also continue to support the growth of San Diego's regional solar, wind, storage, energy efficiency, electric vehicle, and water markets and remain committed to working with private and public partners to hold our region's place at the forefront of the rapidly growing smart cities movement.

If the last 10 years are any indication, it is clear that we are fortunate to be part of a community in San Diego that values innovation, sustainability, and collaboration. Driven by this forward-thinking spirit, our stakeholders in technology companies, government, academia, nonprofits, and the military are committed to shaping a positive clean energy future for San Diego and the world that will carry us into the next decade and beyond.

Jason Anderson is President and CEO of nonprofit Cleantech San Diego, a business organization that positions the greater San Diego region as a global leader in the cleantech economy by fostering collaborations across the private-public-academic landscape, leading advocacy efforts to promote cleantech priorities, and encouraging investment in the San Diego region.