



SAN DIEGO'S CLEANTECH CLUSTER

A pioneer in renewable energy, San Diego's clean technology cluster is second to none. San Diego is one of the nation's top locations for research and development in engineering, life sciences and biotechnology, which are critical to the success of the cleantech cluster. Another key strength lies in San Diego's partnership with its neighbor to the east, Imperial County, which provides cost-effective facilities for companies that ready for production and commercialization. This combination of intellectual and physical capital makes the region one of the most competitive landscapes in the country for cleantech companies.

In 2016, the region ranked #3 in the nation for cleantech leadership.¹ Continued growth in markets such as solar, wind, energy efficiency, storage and electric vehicles has elevated San Diego as a leader in the climate action and smart cities movements. With a commitment to innovation, sustainability and collaboration that includes everyone from technology companies and academia to local government and the military, San Diego continues to lead in the development and adoption of clean technologies.

HIGHLIGHTS

- » **SD employment > US:** San Diego employs 1.9 times as many people in cleantech as the national average.²
- » **Go solar:** San Diego ranks #2 in the nation in solar installations, with more than 93,000 rooftop systems in the region.³
- » **Smart SD:** Smart Cities Summit named San Diego's Smart City Solutions one of the world's top 10 smart city projects.⁴
- » **SDG&E leads the way:** San Diego Gas & Electric became the first California utility to reach the net energy metering cap in 2016.⁵

KEY COMPANIES

- | | | |
|--------------------|-------------------|----------------------------|
| » BD | » Cymer | » MaxLinear |
| » Broadcom Limited | » General Atomics | » Peregrine Semiconductor |
| » Cohu | » Iberdrola Group | » Samsung |
| » CP Group | » Kyocera | » San Diego Gas & Electric |



INNOVATION



MILITARY



TOURISM



LOCAL



INTELLECT

SPOTLIGHT

Transpower

TransPower is an Escondido-based company that offers a broad range of products and services in advanced clean transportation and energy storage. TransPower's flexibly designed systems utilize different types of batteries, motors, and other components to meet the requirements of different vehicles and stationary sites. Its ElecTruck™ system is a market leader for heavy-duty vehicles, including yard tractors, port cargo handling vehicles, and school buses, as well as the largest Class 8 on-road trucks that weigh more than 33,000 lbs.

transpowerusa.com



RESOURCES

California Center for Sustainable Energy

CCSE is an independent nonprofit that helps residents, businesses and public agencies save energy, reduce grid demand and generate their own power through a variety of rebate, technical assistance and education programs.

energycenter.org

Cleantech San Diego

Cleantech San Diego is a nonprofit member organization that positions the greater San Diego region, including Imperial County and Baja California, as a global leader in the cleantech economy.

cleantechsandiego.org

Energy Policy Initiatives Center

EPIC is a nonprofit academic and research center of the University of San Diego School of Law that studies energy policy issues affecting San Diego and California.

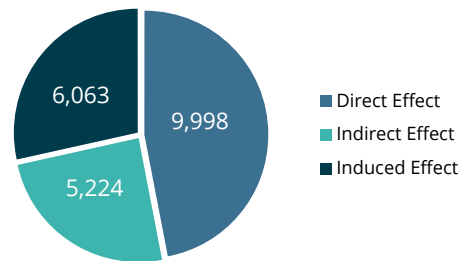
sandiego.edu/law/center/epic

BY THE NUMBERS

Employment Numbers

As of 2014, the cleantech cluster was responsible for **9,998** direct jobs and supported an additional **11,287** jobs in the San Diego region.⁶ Below is a breakdown of the portion of the total jobs that were a direct, indirect or induced result of the cleantech cluster.

**Total Employment by Type of Economic Effect
San Diego Region**



Employment by Key Industries in the Cleantech Cluster⁶

| Industry | Employment | Establishments |
|--|--------------|----------------|
| Hydroelectric Power Generation* | <5 | 0 |
| Instruments and Related Products Manufacturing for Measuring, Displaying, and Controlling Industrial Process Variables | 1,300 | 23 |
| Totalizing Fluid Meter and Counting Device Manufacturing | 478 | 5 |
| Testing Laboratories | 807 | 123 |
| Environmental Consulting Services | 1,408 | 114 |
| Other Scientific and Technical Consulting Services | 2,685 | 2,110 |
| Research and Development in the Physical, Engineering, and Life Sciences (except Biotechnology) | 1,038 | 444 |
| Hazardous Waste Treatment and Disposal | 359 | 9 |
| Other Shared Industries within Cluster | 1,923 | 157 |
| Total | 9,998 | 2,985 |

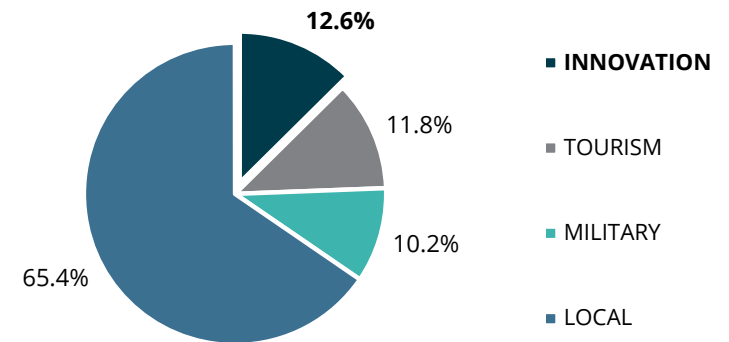
*According to InfoGroup, there are currently no firms with a primary NAICS code for Hydroelectric Power Generation (221111) in San Diego County, however, should any firms began operations in the future, the EDC believes this is an important industry to include in the Cleantech Cluster.

Our Economies

The vitality of San Diego's economy is reliant upon the strength of the region's four economic drivers – innovation, military, tourism and local.

The cleantech cluster is an important part of the region's innovation economy. As of 2014, the innovation economy was responsible for more than 12 percent of the region's total jobs.

**Employment Comparisons
Across the San Diego Region's Economies**



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Sources: Introduction: 1. Clean Edge, "2016 U.S. Clean Tech Leadership Index", 2016 | Highlights: 2. San Diego Regional EDC, Cleantech Study with data from IMPLAN, EMSI, Census Bureau, BEA, Infogroup, CA LMI Department, 2014 3. Environment America, "Shining Cities 2016: How Smart Local Policies Are Expanding Solar Power in America", 2016 4. Cleantech San Diego, "The World's Top 10 Smart City Projects", 2015 5. D Utility DIVE, "SDG&E becomes first California utility to hit net metering cap", 2016 | By the numbers: 6. San Diego Regional EDC, Cleantech Study with data from IMPLAN, EMSI, Census Bureau, BEA, Infogroup, CA LMI Department, 2014