

Clean-Energy Trends 2008



The following is an excerpt from Clean-Energy Trends 2008. To read the full report, please download the PDF file by clicking on the link below.

Amid a challenging economic outlook—plummeting housing prices, rising foreclosure rates, record-high oil prices, sinking consumer confidence, looming recession—2007 was another banner year for clean energy, with no signs of a slowdown in 2008. Solar, wind, biofuels, geothermal, energy intelligence, hybrid- and all-electric vehicles, advanced batteries, green buildings, and other clean-energy-related technologies and markets provided bright spots in an otherwise sluggish economy.

Clean Edge, which has been tracking the growth of clean-energy markets since 2000, reports a 40 percent increase in revenue growth for solar photovoltaics, wind, biofuels, and fuel cells in 2007, up from \$55 billion in 2006 to \$77.3 billion in 2007. For the first time, three of these are generating revenue in excess of \$20 billion apiece, with wind now exceeding \$30 billion. New global investments in energy technologies—including venture capital, project finance, public markets, and research and development—have expanded by 60 percent from \$92.6 billion in 2006 to \$148.4 billion in 2007, according to research firm New Energy Finance.

Further proof of clean tech's move from marginalized to mainstream is abundant. A growing number of governments announced plans to generate electricity from renewables. Corporations continued to jump on, if not lead, the race to transition to a cleaner, greener economy. Venture capitalists in the U.S. invested \$2.7 billion in the clean-energy sector, representing more than 9 percent of total VC activity.

Cleanenergy indices outpaced the broader markets in 2007. For example, the NASDAQ® Clean Edge® U.S. Liquid Series index (co-developed by Clean Edge and NASDAQ) was up 66.67 percent last year, compared with 3.53 percent for the S&P 500 index and 9.81 percent for the NASDAQ Composite index.

According to Clean Edge research:

Biofuels (global production and wholesale pricing of ethanol and biodiesel) reached \$25.4 billion in 2007 and are projected to grow to \$81.1 billion by 2017. In 2007 the global biofuels market consisted of more than 13 billion gallons of ethanol and 2 billion gallons of biodiesel production worldwide.

Wind power (new installation capital costs) is projected to expand from \$30.1 billion in 2007 to \$83.4 billion in 2017. Last year's global wind power installations reached a record 20,000 MW, equivalent to 20 large-size 1 GW conventional power plants.

Solar photovoltaics (including modules, system components, and installation) will grow from a \$20.3 billion industry in 2007 to \$74 billion by 2017. Annual installations were just shy of 3 GW worldwide, up nearly 500 percent from just four years earlier.

The fuel cell and distributed hydrogen market will grow from a \$1.5 billion industry (primarily for research contracts and demonstration and test units) to \$16 billion over the next decade.

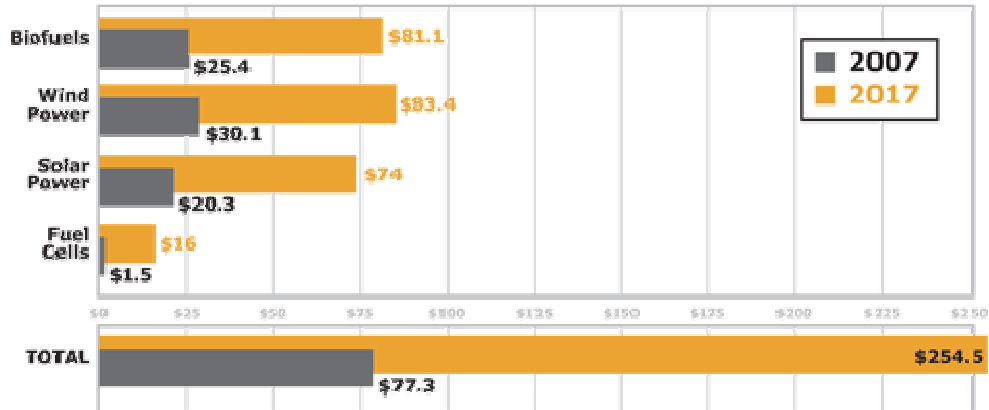
Global Installation/Production Growth: Solar, Wind, Biofuels

	2003	2007	2017 (est.)
Solar PV Installations	620 MW	2,821 MW	22,760 MW
Wind Power Installed	8000 MW	20,060 MW	75,781 MW
Biofuels Produced	7 Billion Gallons	15.6 Billion Gallons	45.9 Billion Gallons

Source: Clean Edge, Inc., 2008

Together, we project these four benchmark technologies, which equaled \$55.4 billion in 2006 and expanded 40 percent to \$77.3 billion in 2007, to grow to \$254.5 billion within a decade.

Global Clean-Energy Projected Growth 2007-2017 (\$US Billions)



Source: Clean Edge, 2008

U.S Venture Capital Continues to Grow and Grow

U.S.-based venture capital investments in energy technologies more than quadrupled from \$599 million in 2000 to \$2.7 billion in 2007, according to New Energy Finance (with supporting data from Clean Edge and Nth Power). As a percent of total VC investments, energy tech increased from .6 percent in 2000 to 9.1 percent in 2007. Between 2006 and 2007, venture investments in the U.S. clean-energy sector increased by more than 70 percent.