

Digest of Green Reports and Studies

Title	<i>Clean Energy Trends 2009</i>
Author	Joel Makower, Ron Pernick, Clint Wilder
Organization	Clean Edge Inc.
Author Contact	N/A
Publication Type	Report-Case Study
Publication Date	March 2009
# of Pages	20
URL	http://www.cleandedge.com/reports/reports-trends2009.php
Summary	Due to the economic downturn, decreased venture capital investments and tightening of the credit market, 2009 will be a time for clean energy companies to refocus and consolidate. The clean energy industry will continue to grow mid- to long-term. This industry will survive and do better than other sectors because of new government spending, regulation, and policies. Clean energy and energy intelligence will be a factor in helping economies around the world pull out of the economic downturn.
Key Findings	<ul style="list-style-type: none"> • Clean energy growth will be at a slower pace than 2008 • Biofuels, wind power and solar photovoltaics are benchmark technologies projected to grow to \$325.1 billion within a decade. • American Recovery and Reinvestment Act of 2009 includes spending and tax credits of \$70 billion for clean-energy and transportation programs. • Utilities will increase their clean energy programs due to favorable government policies • “Clean energy will offer one of the greatest opportunities for both local and global economies to compete and thrive”. • Five key trends that will shape clean energy market in 2009 and beyond: <ol style="list-style-type: none"> 1. “The Grid Goes Online”- Local power plants will be more intelligent, more self-sufficient, able to have a two-way conversation, be able to communicate with other devices, in some case wirelessly”. 2. “Technologies Save Clean Energy For A Rainy (or Calm) Day”-Large scale storage for renewables is the number-one barrier. Currently, several storage technologies are competing for utility business. 3. “New clean-energy markets emerge around the globe”- New countries are joining in the clean-energy market because they see the economic development, job creation, and energy diversification benefits of renewable development. 4. “Grid Infrastructure Grabs The Spotlight”-There is a lack of transmission lines, and lack of capacity from transmission lines to handle power generated by wind farm and solar plants. President Obama has made upgrading and expanding the U.S. power grid a top priority. 5. “Micropower Shows It Is No Small Thing”- There is a downsizing of central power plants. Solar cell, fuel cells, wind turbines and other sources are becoming the small, regional grids. This is good for security reasons, flexibility and in case of widespread utility failure.
Recommendations	In order to get money flowing to clean-energy technologies, the Obama Administration must find ways to streamline the process of government financing.
Definition of “Green”	Clean tech includes three key clean-energy sectors which are biofuels, wind power, and solar photovoltaics
Methodology	Surveys; Literature research
Data Sources Cited	Clean Edge Survey; Renaissance Capital research firm; New Energy Finance; Deutsche Bank Group DB Advisors.
Report Geography	
Green Occupations Cited	<ul style="list-style-type: none"> • Solar jobs • Wind turbine jobs • Biofuel jobs
Green Industries Cited	<ul style="list-style-type: none"> • Clean energy manufacturers and developers • Solar • Wind • Biofuels • Energy • Utilities • Transportation

Keywords	Clean-tech markets; Solar; Wind; Biofuels; Trend; Clean energy; Grid; Storage; Micropower; Technologies; Photovoltaics; Global; Clean energy investment; Power plant; Energy storage; Solar power thermal plants.
Legislation Cited	American Recovery and Reinvestment Act of 2009
Bibliography (Y/N)	N
Reviewer Name/Org	L. Wong, State of California

NOTE: This Digest is provided for information purposes only. Employment Development Department does not necessarily endorse any of these reports or publications.