

## Green Economy Continues to Grow

2012-2013 Are big years in the transition to a Green Economy, though mainstream media headlines may not reflect it.

While many focus on the boom in natural gas, the growth in wind and solar are certainly deserving of similar headlines. Record-breaking installations over the past few years have boosted renewable energy as the supplier of almost 16% of U.S. electrical generating capacity, more than nuclear and oil combined.

In March 2013, renewable energy accounted for 100% of all new electrical capacity in the U.S., and 82% for the first quarter as a whole. 1546 megawatts (MW) of renewables came online, compared to 340 MW of natural gas- according to the Federal Energy Regulatory Commission (FERC), in the form of six wind farms (958 MW), 38 solar farms (537 MW) and 28 biomass plants (46 MW). The solar added is more than double that of the first quarter last year.

In 2012, renewables accounted for almost half of all new electrical generating capacity — 46.22%. And this doesn't count the growth of small rooftop solar systems.

### Big Success Stories: The Growth of Small Solar

In 2012, solar grew 76% in the U.S., with 3.3 gigawatts (GW) installed in more than 300,000 solar PV systems. That's 11% of all solar PV installed in the world last year, the highest market share in at least 15 years, says the Solar Energy Industries Association.

The U.S. now has 7.22 GW of solar PV and 546 MW of concentrating solar, enough to power 1.2 million homes! And the industry is adding jobs eight times faster than the rest of the economy, employing an estimated 119,000 Americans at 5,600 companies, mostly small businesses.

Solar is growing on two fronts in the U.S. First, the new solar leasing model is transforming small solar because it allows people to put solar on their roof without paying any upfront costs. SolarCity (NASDAQ: SCTY), which went public late last year, is leading on this front. Its most exciting project is SolarStrong, which is doubling the number of residential systems in the U.S. — 120,000 rooftop systems at 124 U.S. Army bases in 33 states. **The Army's goal is for renewables to supply 25% of energy by 2015.**

The other area of solar that we'll see big gains in this year are utility-scale plants. Huge solar plants are under construction in the western U.S. that will bring energy to millions of people, many of them built by U.S.-based First Solar (NASDAQ: FSLR).

Outside the U.S., in addition to China, which is adding astounding amounts of solar, Japan's solar market is booming because of its very generous feed-in law. Worldwide, the solar industry passed the 100 GW threshold in 2012 and is set to grow 20% this year, adding another 30 GW. That level of growth could make the solar industry sustainable without subsidies by the end of 2014.

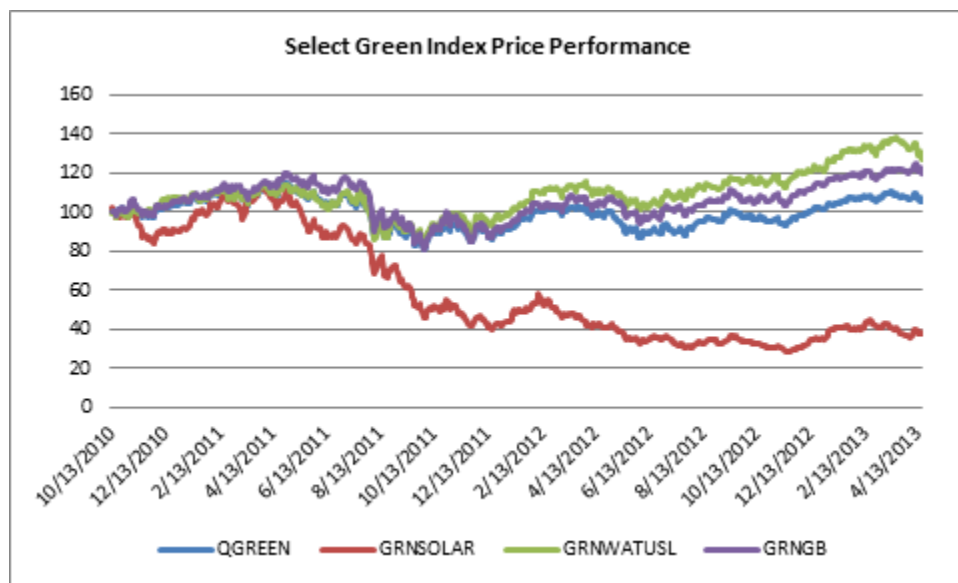
## Record Highs in Wind Energy

Even with last year's policy uncertainty in the U.S. and European countries, wind installations grew to record highs in 2012, with the U.S. leading China for the first time in years. More than 60% of new wind capacity was in the U.S. and China, says BTM Consult. The cost for wind energy is at all-time lows but cheap natural gas is undercutting it right now.

The world's biggest corporations are deepening commitments to getting their energy from renewables. Apple is a great example: *all of its data centers now run solely on renewable energy* and the company is on track to be 100% powered by renewables, up from 75% today.

Green building is another Green Economy sector that's hit a tipping point. World markets increasingly perceive green design as standard, best practice. While 2008 surveys indicated people built green to "do the right thing," in 2012 that shifted to meeting "client and market demand," according to McGraw Hill Construction. Eighty-nine percent of industry professionals say they use or specify green building products.

Going forward, cap-and-trade programs will have a big impact on transitioning to a green economy. California is linking its program with Quebec, the first of many provinces and countries. China has begun pilot programs in major cities, and Australia, South Korea and Mexico have all expressed interest in forming regional and eventually worldwide programs.



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