

BOS/INVERTERS

## Tough Times Ahead for PV Inverter Incumbents



GTM Research publishes flagship report on PV inverter markets, technologies and strategies.

by Nicholas Rinaldi

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A new 225-page report from [GTM Research \(http://www.gtmresearch.com\)](http://www.gtmresearch.com) finds that, over the next three years, leading PV inverter suppliers will be pinched by shifts in global demand and the continued swing toward low-price market segments and geographies. This swing will push PV inverter prices down, from a global blended average of \$0.22 per watt in 2012 to just \$0.14 per watt in 2016 -- a compound annual reduction of 10 percent.

GTM Research's report, titled [The Global PV Inverter Landscape 2013](http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013) (<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>), finds that incumbent PV inverter manufacturers remain at the front of the market today, with low-cost players from Asia and diversified giants gaining ground as PV demand expands globally.

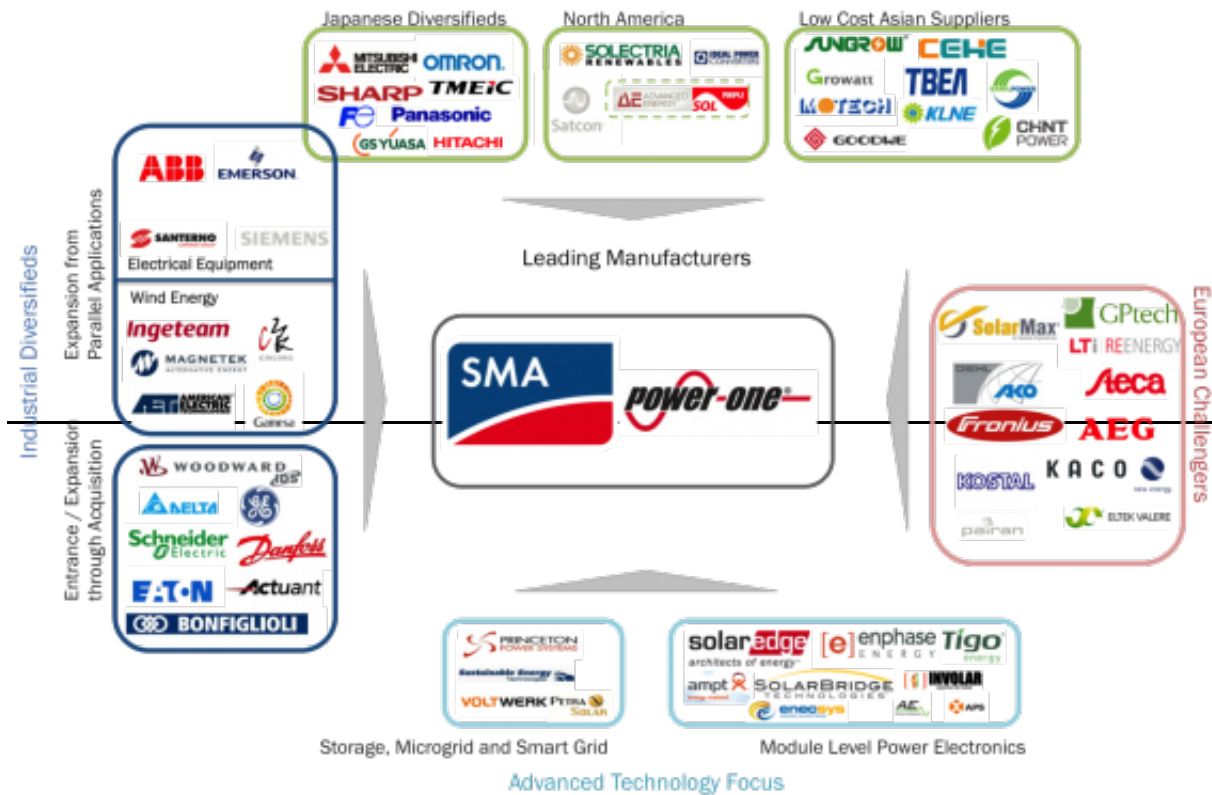
### **GTM Research Top 10 Competitively Positioned PV Inverter Companies**

1. SMA
2. Power-One
3. Schneider Electric
4. SunGrow
5. Advanced Energy (REFUsoI)
6. ABB
7. TMEIC

- 8. KACO New Energy
- 9. Chint Power
- 10. Fronius

The report's ranking is based on key qualitative metrics that measure each company's product offering, bankability, and growth prospect alignment. While this year's ranking is lead by incumbent vendors, these companies are facing increased competition and collapsing margins brought on by global oversupply, diffusion of PV demand away from European markets, and the commercialization of advanced technologies such as module-level power electronics (MLPE).

**FIGURE: Global PV Inverter Taxonomy 2013**



(<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>)

Source: The Global PV Inverter Landscape 2013

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“While SMA continues to dominate the rankings, near-term growth will be challenging as it competes with new low-cost or well-capitalized suppliers,” said MJ Shiao, the report’s author and a Senior Analyst at GTM Research. “Even so, unseating SMA and achieving success globally will not be easy despite a fragmented landscape. Factors such as bankability, reliability, and serviceability are transforming from buzzwords to

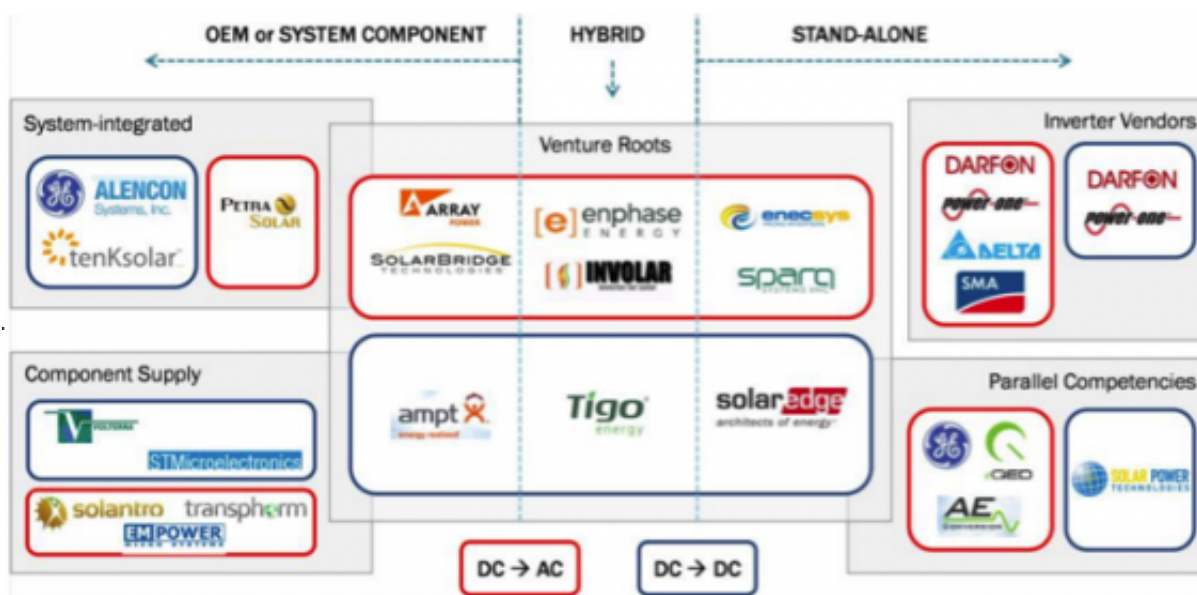
key values. In conjunction with a demand market that is rapidly shifting to new geographies, these stringent barriers will force incumbent firms toward restructuring, mergers & acquisitions or obsolescence.”

This shakeout is already playing out, including the recent liquidation of Satcon, divestments by Diehl Controls and Siemens, and strategic acquisitions by SMA (Zeversolar) and Advanced Energy (REFUso).

In addition to incisive analysis on the PV inverter market’s competitive landscape, the report (<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>) includes a competitive outlook and ranking of MLPE technology suppliers. These suppliers have seen demand for microinverter and DC optimizer technologies increase exponentially, rising from just 51 megawatts in 2009 to over 785 megawatts in 2012. While much of the adoption has come from residential systems, small and large commercial applications are joining the fray as well.

“While there are numerous companies attacking the MLPE space, three companies -- Enphase, SolarEdge and Tigo -- account for over 93 percent of the total market share of shipments and installations, with Enecsys, SolarBridge, Petra Solar and others lagging much further behind,” said Shiao. “The first-mover’s advantage has allowed these players to make critical R&D and distribution partnerships and to gain significant market traction ahead of newcomers. Nevertheless, we expect significant shakeup in the rankings, especially as traditional inverter companies like SMA and Power-One continue to develop and promote their own MLPE products.”

**FIGURE: Module-Level Power Electronics Taxonomy**



(<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>)

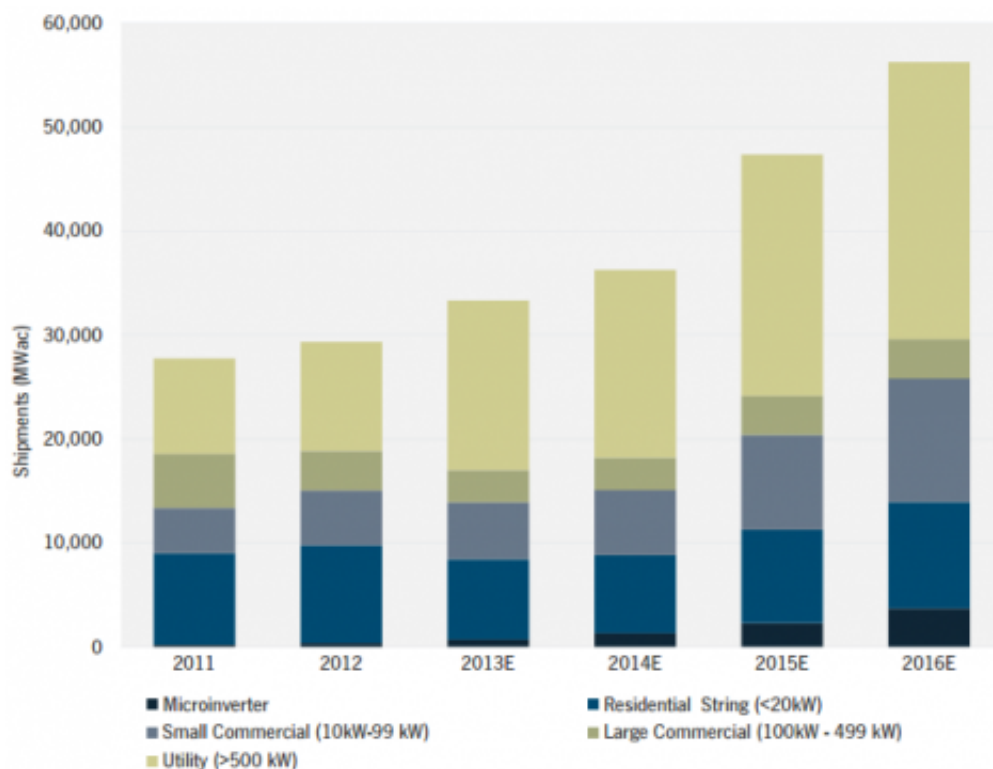
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The Global PV Inverter Landscape 2013

(<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>) also contains analysis on global inverter shipments from 2012, with shipment forecasts by technology through 2016.

**FIGURE: Global PV Inverter Shipments by Inverter Size, 2011-2016E**



(<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>)

markets continued to work off channel inventory and falling markets further stagnated shipments in Europe. Throughout 2013, GTM Research forecasts additional shipments to come on-line in major growth markets like China, Japan and the U.S. By 2014, the report sees the inverter market in consolidation mode as struggling inverter suppliers exit the market. A healthier market with vast new emerging markets will dictate the course of 2015 and 2016, and GTM expects shipments to boom to serve new, growing markets. For more information on The Global PV Inverter Landscape 2013: Technologies, Markets, and Survivors, visit <http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>.)

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For more information on *The Global PV Inverter Landscape 2013* (<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>) report, visit [www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013](http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013) (<http://www.greentechmedia.com/research/report/the-global-pv-inverter-landscape-2013>).