

# THE SECRET SOLAR DEVICE STOCK Sitting on a \$400 Billion Mega-Trend

**EDDY ELFENBEIN**

## SolarEdge Technologies (SEDG)

I want to point you in the direction of a company that is involved in providing inverter solutions across all photovoltaic market segments – **SolarEdge Technologies (SEDG)**.

In brief, the company has invented an intelligent inverter solution that has changed the way power is harvested and managed in a solar photovoltaic (PV) system. The SolarEdge DC optimized inverter system maximizes power generation at the individual PV module-level while lowering the cost of energy produced by the solar PV system.

Since beginning commercial shipments in 2010, SolarEdge has shipped over 14.6 Gigawatts of its DC optimized inverter systems and its products have been installed in solar PV systems in 130 countries. A quick look at some of the other pertinent numbers, as of the end of 2017, for SolarEdge show:

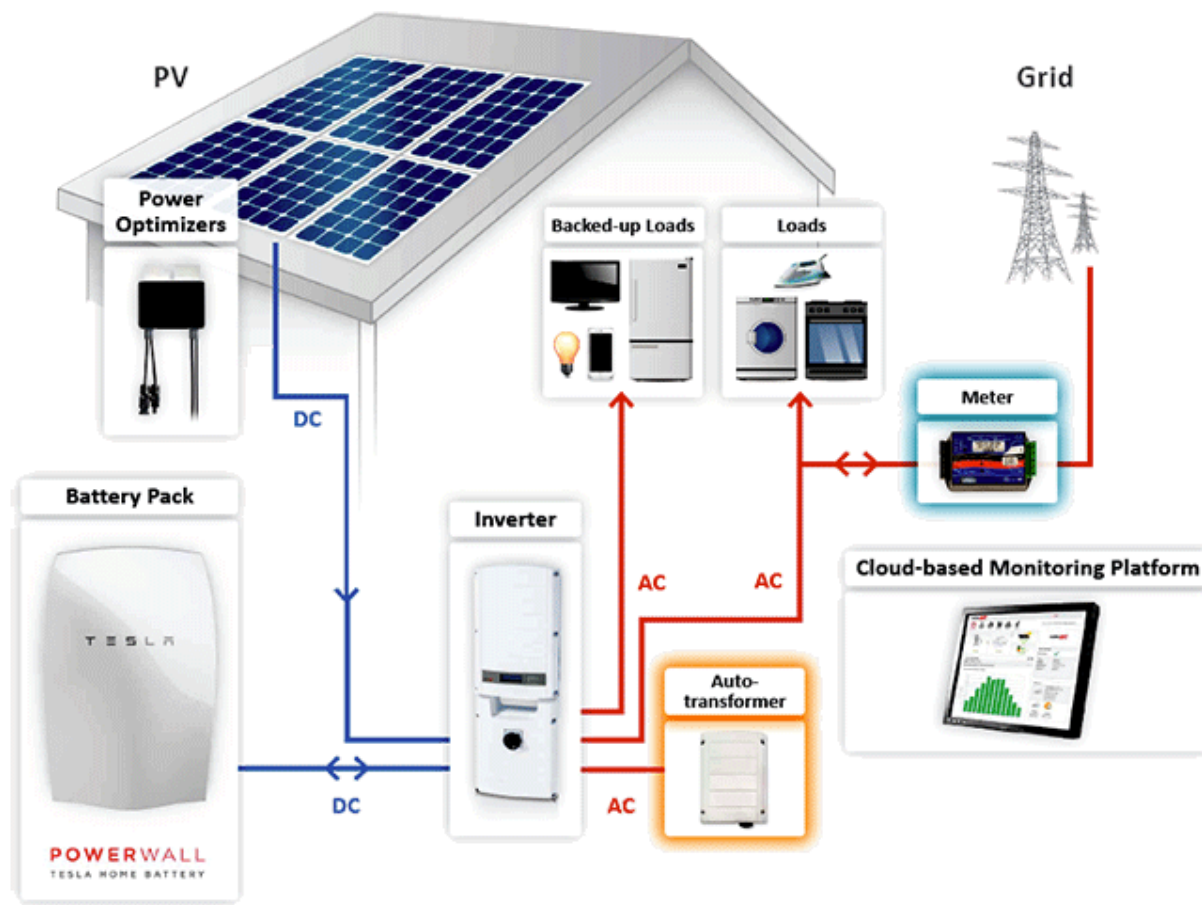
- 40 million power optimizers and more than 1.5 million inverters shipped.
- 1,250,000 monitored systems in more than 130 countries.
- 303 awarded patents and 240 additional patent applications. Those are up from 117 awarded patents and 150 patent applications from when coverage was first initiated on SEDG in March 2018. They've been busy.

Let me now tell you what differentiates the company's technology. This is important because SolarEdge is well on its way to becoming the de facto solar inverter manufacturer with their DC voltage optimizer strategy versus the more expensive micro-inverter strategy used by their rivals.

Traditional PV systems typically have centralized inverter or string inverter architecture. The inverter performs MPPT (Maximum Power Point Tracking) for large quantities of solar panels as a whole. Since the panels are connected in series to form strings, the same current must flow through all the modules, so the solar inverter continuously adjusts the electric current in the system to find the average optimal working point of all the modules.

# Solar Device Stock Sitting on a \$400 Billion Opportunity

As a result, potential power may be lost whenever a mismatch (which is usually unavoidable) exists between modules. Other factors such as weather will also cause losses in yields. Additional drawbacks of traditional PV systems include having to match all strings' length and orientation and having monitoring visibility and fault detection limited to the inverter or to the string level. This image from Tesla demonstrates more clearly where the inverter sits in the solar generation process.



SolarEdge delivers a distributed system that tackles these challenges. Energy loss due to panel mismatch is prevented by performing MPPT for each panel individually. String voltage is kept fixed at all times, so strings can be combined regardless of length, tilt, or type of panels used. Continuous performance measurement enables online monitoring and fault detection at the panel level. To achieve all of this without raising the cost of a solar system, SolarEdge provides panel optimizers as well as its own inverter and monitoring web portal.

# Solar Device Stock Sitting on a \$400 Billion Opportunity

The company's Power Optimizer is embedded into each panel by panel manufacturers instead of the junction box, or can be retrofitted by PV installers onto regular modules. The power optimizer optimizes energy output by performing MPPT individually for each panel and maintains a fixed DC string voltage. Power optimizers also collect performance measurements for each panel, transmitting the data over existing power lines.

The SolarEdge Solar inverter is responsible for DC to AC inversion while MPPT and voltage management are handled by power optimizers separately for each module. Fixed string voltage ensures operation at the highest efficiency (up to 97%) at all times, regardless of the string length and temperature.

The company offers single-phase inverters with a rated AC power output of between 3,000 and 11,000 watts, as well as three-phase inverters with a rated AC power output ranging between 7,000 and 25,000 watts.

SolarEdge is having a banner year in 2019. After the first nine months of the year, SolarEdge cracked \$1 billion in sales. That's up 50% over the same period in 2018. On November 6, SEDG reported Q3 earnings of \$1.21 per share.



That was five cents more than expectations. The CEO said, "Our performance this quarter was at the upper range of our guidance, with record revenues, record non-GAAP profitability and record cash generation." During Q3, the company shipped 1.5 Gigawatts

# Solar Device Stock Sitting on a \$400 Billion Opportunity

(AC) of inverters. For Q4, the company expects revenues to range between \$410 million and \$420 million. They also see gross margins between 32% and 34%.

The stock pulled back slightly, and is currently in the bottom of the new range it established after moving higher last quarter.

I know SolarEdge has been a big winner for us, but I do want to note the untimely passing of the company's CEO, and founder, Guy Sella, in late August. Mr. Sella had been battling cancer for a few years, and passed the title to interim CEO Zvi Lando just before he passed away.

Mr. Lando is the VP of Global Sales for the company, and I don't foresee any major disruption to operations resulting from the transition under the unfortunate circumstances.

**Recommendation: Buy Below \$115.**

The information in this email and corresponding websites are neither an offer nor a recommendation to buy or sell any security, options on equities, or cryptocurrency. Investors Alley Corp. and its affiliates may hold a position in any of the companies mentioned. Investors Alley Corp. is neither a registered investment adviser nor a broker-dealer and does not provide customized or personalized recommendations. Past performance is not necessarily indicative of future results. No trading strategy is risk free. Trading and investing involve substantial risk, and you may lose the entire amount of your principal investment or more. You should trade or invest only “risk capital” – money you can afford to lose. Trading and investing is not appropriate for everyone. We urge you to conduct your own research and due diligence and obtain professional advice from your personal financial adviser or investment broker before making any investment decision.

This is not real-time data and should not be interpreted as such.

© 2020 Investors Alley Corp. All rights reserved. Any reproduction, copying, or redistribution, in whole or in part, is prohibited without written permission from Investors Alley Corp., 555 W 5th St, Floor 35, Los Angeles, CA 90013 or [www.investorsalley.com](http://www.investorsalley.com). For complete terms and conditions governing the use of this publication please visit [www.investorsalley.com](http://www.investorsalley.com).