

Investment Case

A consensus name in solar equipment, with a leading market share in the micro inverter space. Enphase is profitable and well managed and continues to grow revenue fast. Its current strategy is to offer bundled solutions combining solar + storage + software, becoming a one stop shop name for home and business owners' energy systems. The US IRA bill is going to provide even greater momentum for revenue growth.

Technology

Proven technology



Patented products



- US based Enphase was founded in 2006 and is globally known for being a leader in the microinverter segment, launching the first of its kind in 2008.
- A solar microinverter is a plug and play device that converts DC generated by an individual solar panel into AC to be used by the grid. It maximises efficiency compared to the traditional string inverter, wherein a poorly performing panel compromises all the rest.
- Microinverters are also more suitable for rooftops with different orientations and angles.
- Their new IQ8 microinverter costs between \$166 and \$242 per unit and comes with a 25-year warranty.
- Enphase has entered the energy storage business through its IQ Battery (3.3 kWh and 10 kWh, costing \$5k to \$10k/unit) and is pushing its packaged solution of solar + storage + software.

Impact

Key enabler of 'smart energy'



Material decarbonization potential



- Distributed generation offers a credible replacement for centralised fossil fuel power generation that solves the energy trilemma of security, sustainability and affordability.
- Enphase's products play a foundational role in this distributed energy system that offers security and autonomy, allowing users to become 'ProSumers' and sell their excess electricity back to the grid.
- Exponential roadmap predicts that solar PV can avoid 4.71 Gt of CO₂e from entering the atmosphere until 2030, and iClima predicts that US residential solar rooftops can account for 0.8%-2% of total Potential Avoided Emissions (36 Mt of CO₂e to 94 Mt of CO₂e).

Tailwinds

Pushed by key policies around the world



Pulled by consumer adoption of distributed generation as a cost saver



- Favourable consumer sentiment:** Consumers in key jurisdictions trying to avoid future increases in electricity cost. BloombergNEF predicted that US households will install a record amount of solar (ca. 5.6 GW) by the end of 2022.
- Extremely supportive regulation in key jurisdictions:** Solar rooftops are a key solution in the US IRA bill (30% tax credit for the next 10 years) and the REPowerEU plan that focuses on solar as a strategy to cut down the consumption of 9 billion m³ of natural gas annually by 2027. This can be achieved in part by a fast rollout of 19 TWh of solar rooftop PV by the end of 2022 under the "Rooftop Solar Initiative". In the EU rooftops already supply more electricity than solar farms, and could provide 25% of the EU's power needs.
- Innovation:** Companies like Enphase are rethinking electricity consumption, providing digital solutions that promote optimization of the assets (e.g. solar panels and batteries) and efficient use (e.g. demand response and energy efficiency) of the resources.

Financial & Business Model

Hypergrowth company (>40% revenue growth)



Competition on price



- Enphase relies on over 5,000 installation partners worldwide and outsources its manufacturing to third parties. Their products are perceived as top quality, but competition is increasing.
- Enphase is gaining market share outside the US, with sales in Europe up 69% in 2Q22 over 1Q22, led by strong growth in Germany and the Netherlands.
- Solid organic growth combines with acquisitions, with five completed since the beginning of 2021 (an EV charger and four installers). With acquisitions the company is trying to get into the lucrative storage system as a service (a 4th order innovation) market, a recent VPP program in Vermont being a perfect example.



Assessment: **Green Swan** (profound transformation)

Solution: Smart Energy

Innovation orders: 1st and 2nd targeting 4th



Segment: Renewable Energy Equipment

BAU Disrupted: Centralized dated, fossil fuel-based grid



Decarbonization
Preclude CO₂e emissions from ever taking place



Pollution reduction

Source: Enphase Solar



Over 48 million
microinverters sold worldwide
= Over 15 GW of cumulative shipments of microinverters



31 Megatons of CO₂e prevented
from entering into the atmosphere
= Enough to power 3.9 million homes with energy for one year

2.5M+

Over 2.5 million
systems deployed



In over 140 countries

Source: ESG report 2021

As of Sep 6th, '22		Source: <u>Company filing</u>	
Market Cap:	\$42.1 Billion		
Share Price:	\$311.3		
52 Week Range:	\$113.4 to \$311.73		
Price/Sales (TTM):	22.94		
EV / EBITDA:	123.6		
US\$ MM, Figures as per US GAAP			
	2Q22	2Q21	% Growth
Revenue	\$530.2	\$316.1	67.7%
Gross Margin	41.3%	40.4%	
Operating Income	\$94.0	\$59.4	58.3%
Net Income	\$76.9	\$39.3	95.6%