

W U T I S



Equity Research Division

SolarEdge, Inc.

The backbone of every PV system

Target Price: \$ 353.90

Current Price: \$ 304.60

Upside Potential: 16.19%

Recommendation: BUY

Investment Horizon: 3 Years

Vienna, 10.06.2022

Team Overview

Equity Research



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Share Price Performance

Fierce competition and a volatile market-environment is resembled in SolarEdge's stock performance



Share Price – Major Events

- [1] 03.11.2020 (-22.92%) – The share price crashed after the company reported earnings the day before. The company missed revenue expectations by 18% compared to the year-ago quarter.
- [2] 15.01.2021 (-15.84%) – Tesla launched its own solar inverter, representing a threat to SolarEdge.
- [3] 27.10.2021 (+9.13%) – Oil and gas prices continued to rise and showed no signs of coming down as winter approached. In addition, interest rates decreased.
- [4] 24.02 -28.02.2022 (+37.49%) – Share price skyrocketed with Russia's invasion of Ukraine, as the continent renews efforts to reduce its reliance on Russian oil and gas supplies which accelerates global energy transition.

Key Stats

- **IPO:** 25.03.2015
- **Ticker:** SEDG (NasdaqGS)
- **52-week range:** \$200,86 – \$389,71
- **Market Cap:** \$16.972 bn

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Investment Thesis

An innovator in the PV space well positioned to benefit from the paradigm shift in the energy industry

Key investment highlights



1

SolarEdge's technical solutions tackle common challenges the PV market is facing, enabling efficiency gains and driving down costs.

2

SolarEdge's unique product portfolio captures value along the entire Prosumer-Ecosystem.

3

Accelerating efforts targeting decarbonization and a renewables-driven distributed smart-grid creates a favorable market-environment.

4

Recent global turmoil has driven prices of conventional energy sources above historical highs, re-sparking demand for renewables. This is reflected in SolarEdge having a Q1 backlog amounting to over 100% of 2021 sales.

5

Current economic environment potentially decreases incentives to make long-term investments in PV installations on both the residential and commercial level.

6

As R&D focused company it is vital to protect patents to secure technological advantage. However, SolarEdge's IP is regularly challenged by various competitors in multiple jurisdictions.



SolarEdge

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Business Overview

Company Overview

Experienced management team that has positioned SolarEdge on its high-growth trajectory

Company description



SolarEdge is a provider of intelligent inverter solutions for the photovoltaic industry for residential, commercial, and soon utility-scale solar PV installations



The product portfolio includes¹:

- Inverter – 42.17%
- Optimizer – 42.19%
- Lithium-Ion battery & Software – 15.64%

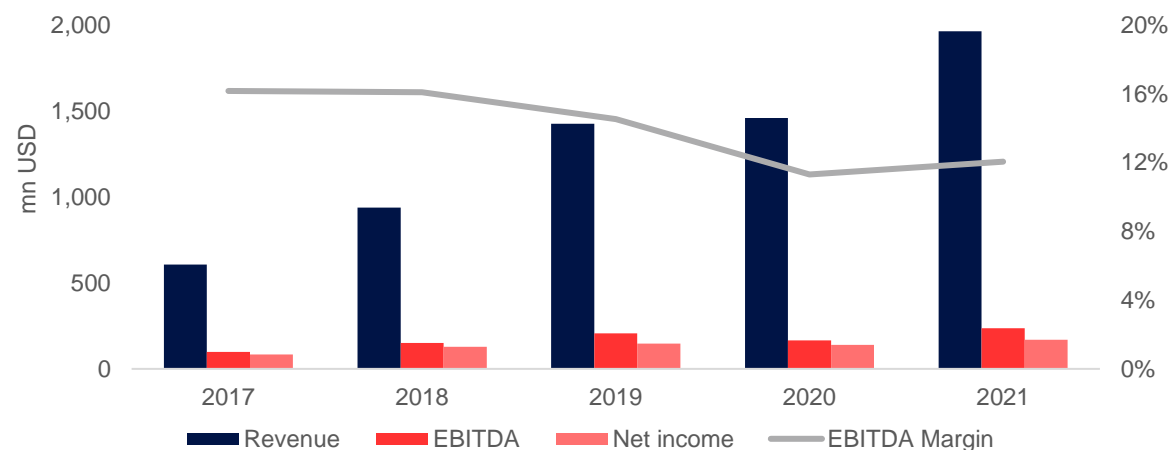


Operations across North America, Europe, the Middle East, Africa and Asia



Founded in 2006 and headquartered in Herzilya, Tel Aviv, Israel

Financials



Management team



Zvi Lando

CEO since 2019
Joined SEDG in 2009 after
16 years at Applied Materials



Ronen Faier

CFO since 2011
Held several senior finance
positions



Meir Adest

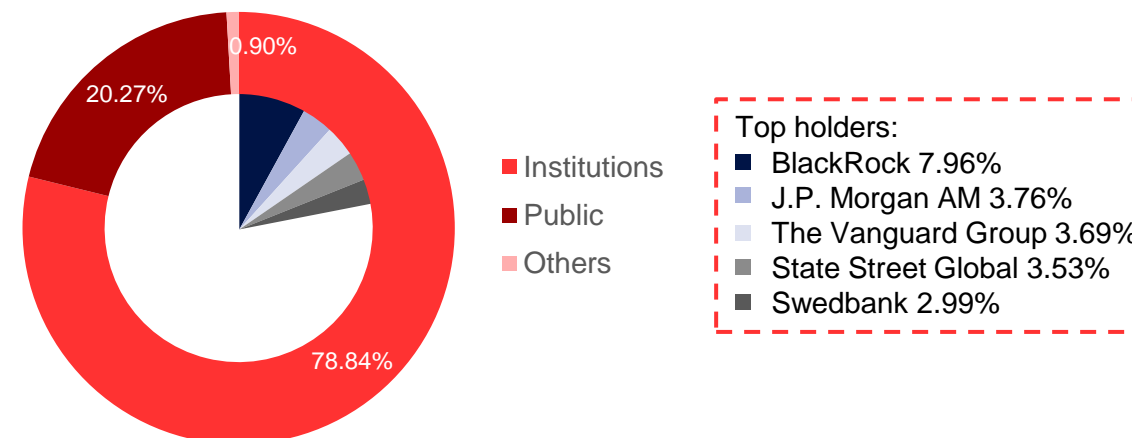
Co-founder, CPO since 2020
Has served as VP since 2007



Uri Bechor

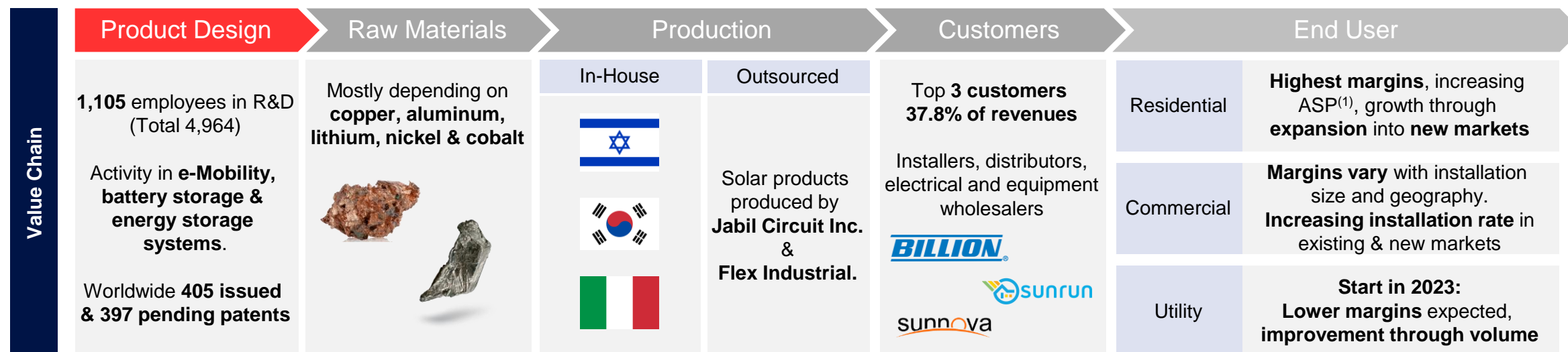
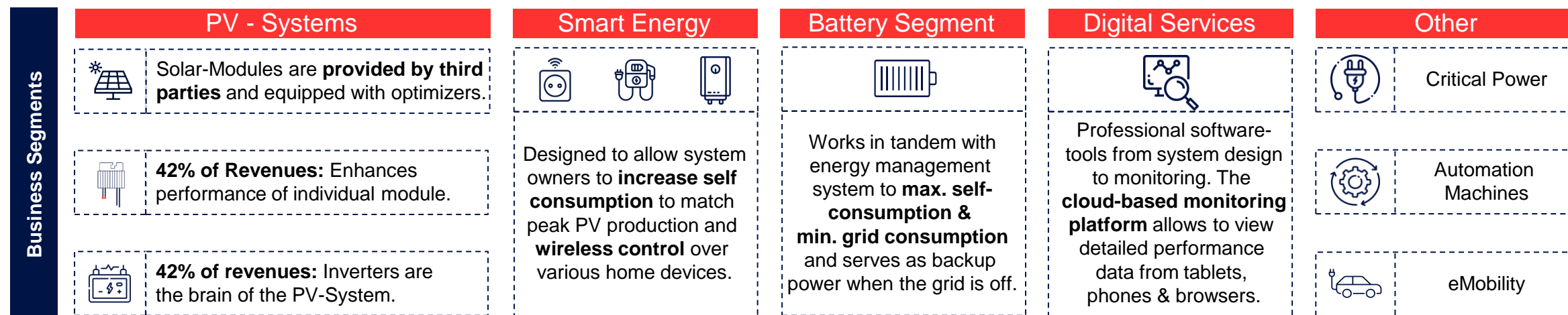
COO since 2019
Former Senior VP at Flex

Shareholder structure



Business Model

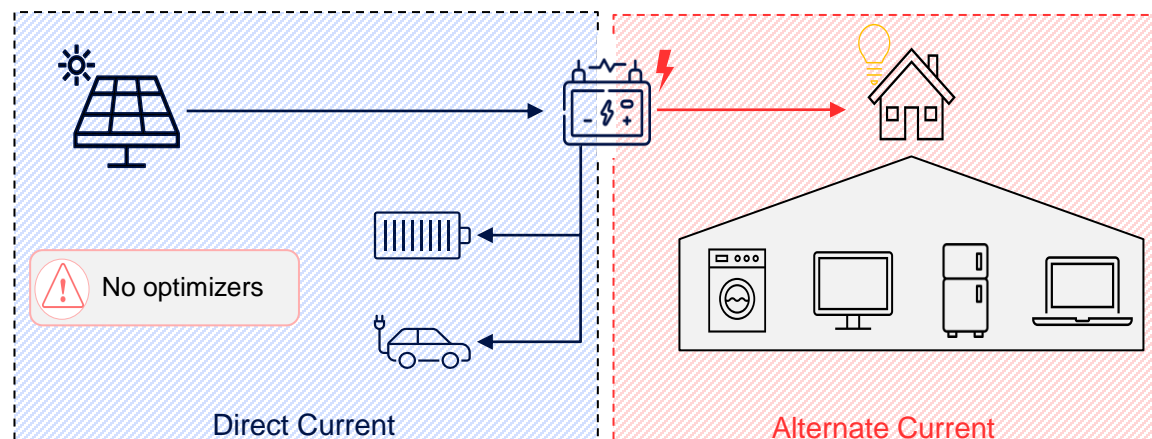
SolarEdge's business model heavily relies on their R&D department and innovative product portfolio



Conventional Solar System Topologies

Apart from SolarEdge's topology, there are two prevalent system technologies

String Inverter – Centralised DC to AC conversion



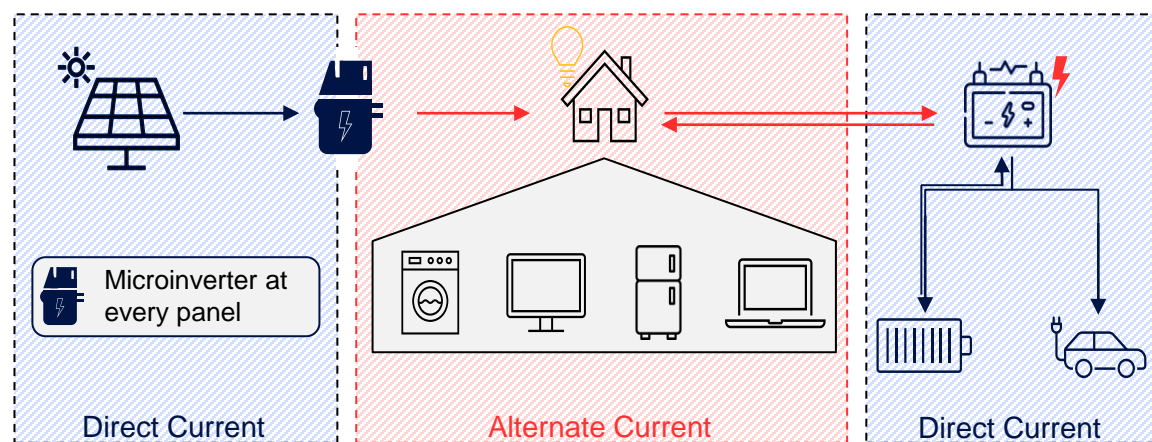
Advantages

- Easier system maintenance with no electronics on the roof
- Durable and reliable
- DC power can be utilized

Drawbacks

- Panels work on their weakest link
- Only string level monitoring is possible
- All panels must be aligned and in the same angle

Microinverter – Panel level DC to AC conversion



Advantages

- Each panel can perform optimal
- System can easily be expanded
- Monitoring on panel basis is possible

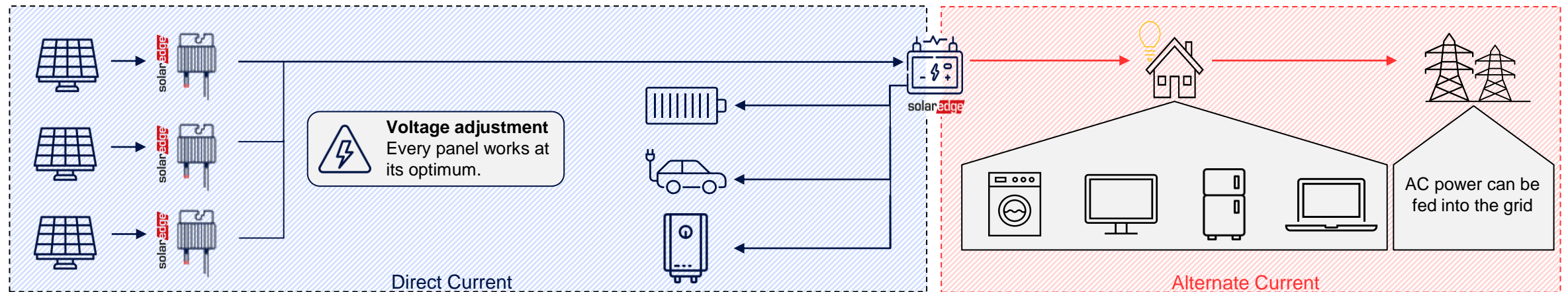
Drawbacks

- Safety issues: Electronics are all located on the roof
- Instant conversion to AC (Alternating Current)
- Added complexity, and thus less reliable

The SolarEdge – „Edge“

SolarEdge's topology combines the best of both worlds and creates a superior technology

The SolarEdge way: DC – coupled architecture



Resulting advantages

Benefits



Accessibility

Inverter functionality is split. The more complex – and more difficult to repair – inverter is mounted accessibly on the wall.



Full roof utilization

It is possible to mix different orientations and panel types to maximize PV power production given the available roof space.



Superior safety

Protect asset and people through automatic shutdown of the high DC voltage during installation, maintenance and emergency.

Outcome



Minimizing conversions

Only one conversion from AC to DC is needed
Saves ~ 8% of the energy generated.



Independent from weakest link

Maximized output from each individual module through optimizers.



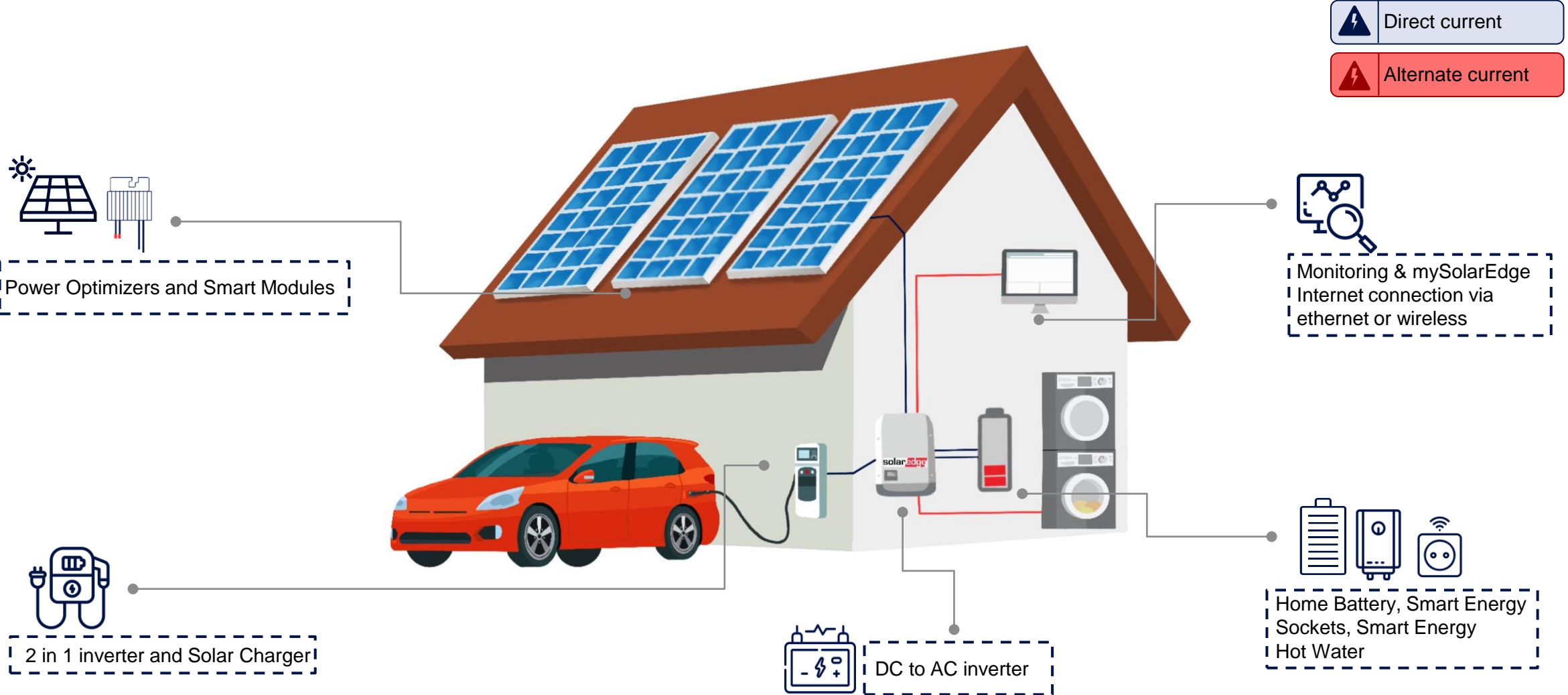
Ease of maintenance

Trough monitoring, faulty modules or strings can be identified rapidly.

EFFICIENCY

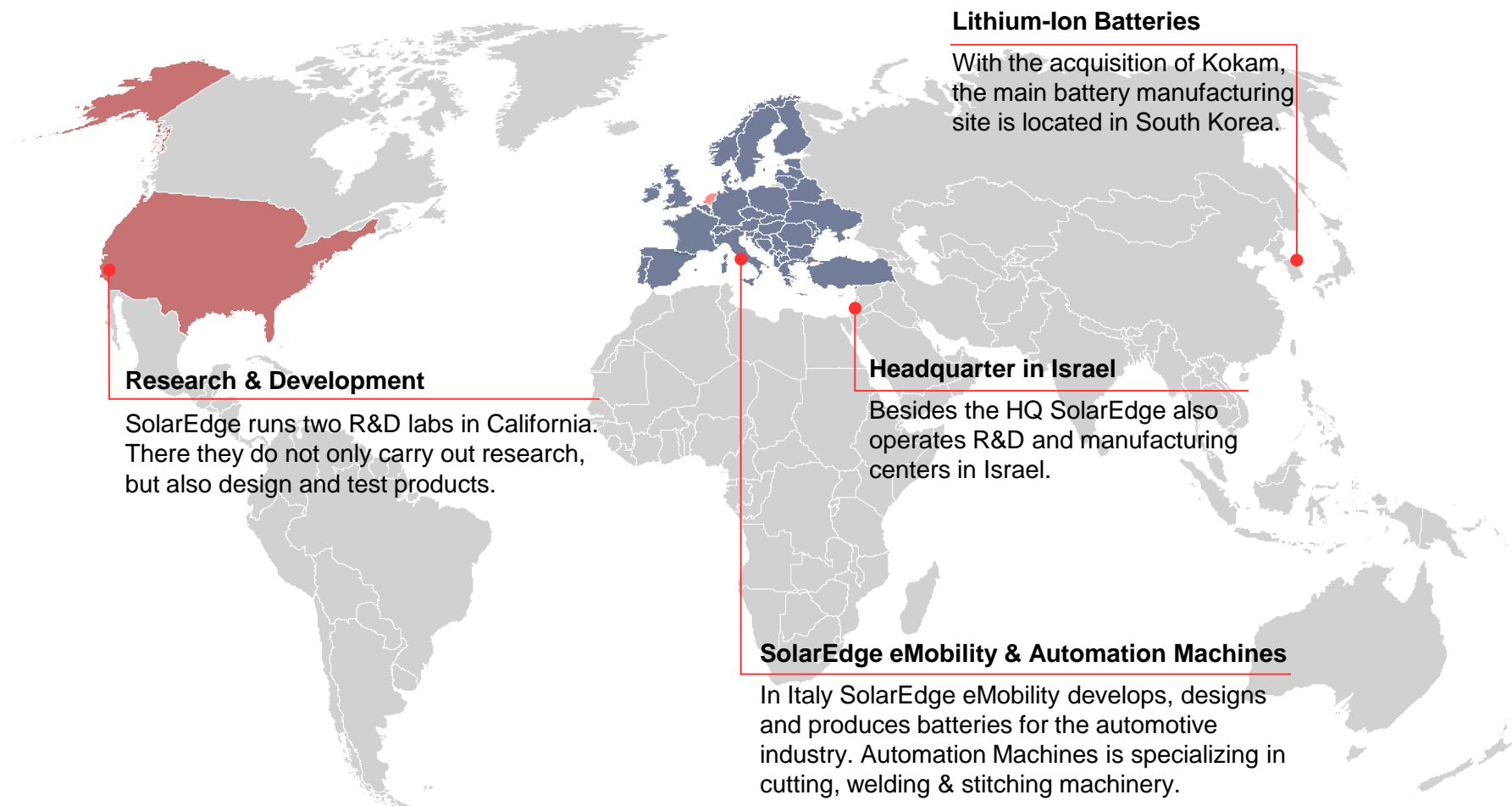
Product Ecosystem

SolarEdge is offering a single solution for PV, storage, smart energy and EV charging



Through recent acquisitions SEDG expanded their product and regional portfolio

Key sites



Company timeline



M&A: I.E.T Spa
S.M.R.E Spa
Kokam



Launch: mySolarEdge application



Launch: Residential battery
4th generation power optimizer

Plans for 2022:



New production partnership in Mexico



Sella 2 - New manufacturing plant in Korea

2019

2020

2021

2022



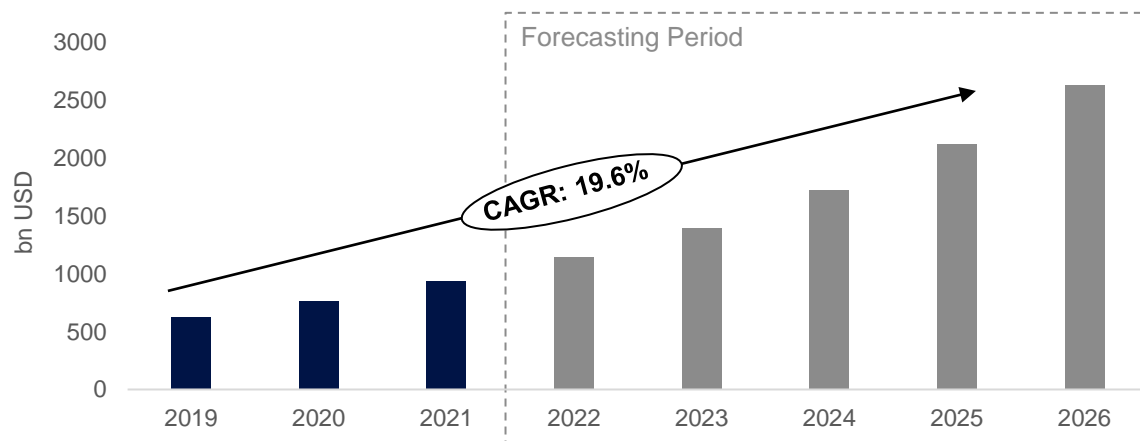
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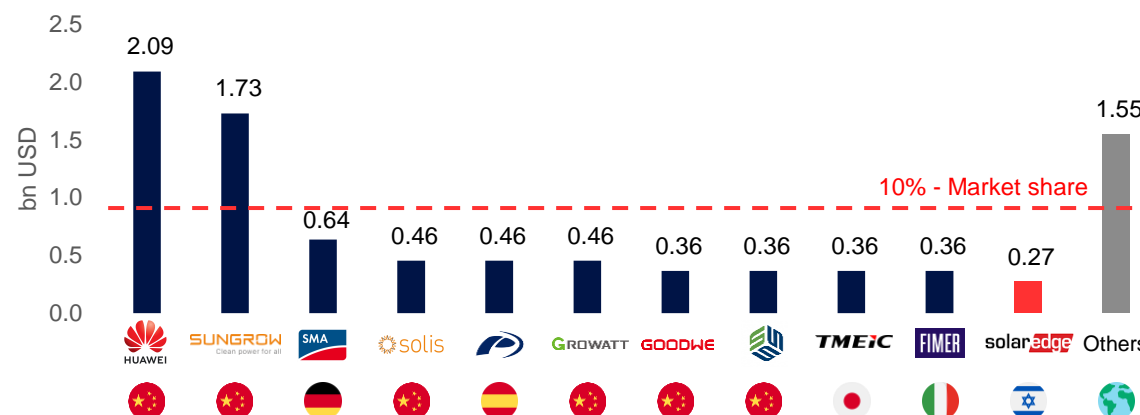
Market & Industry Overview

Decarbonization and prosumer trend accelerates PV market growth in the coming years

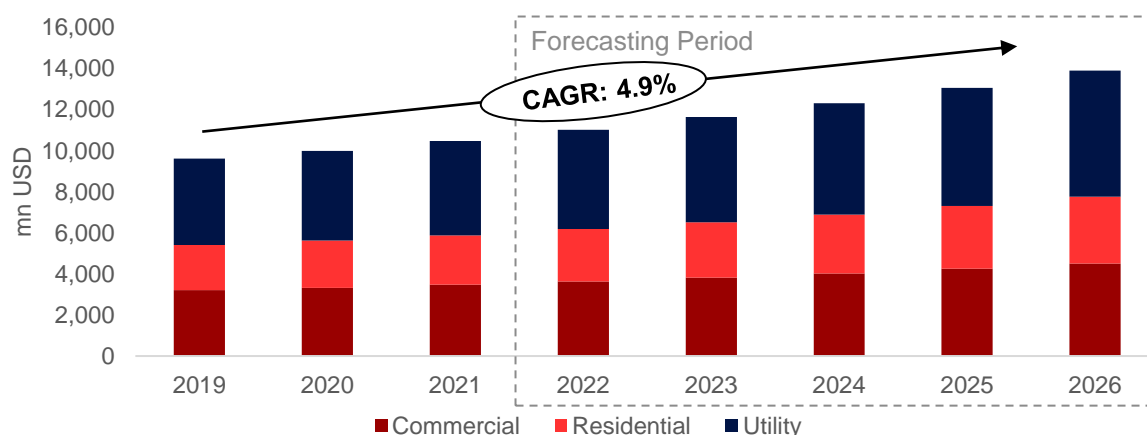
Photovoltaic market size



Competitors' market share of PV inverters



PV Inverter market size per segment

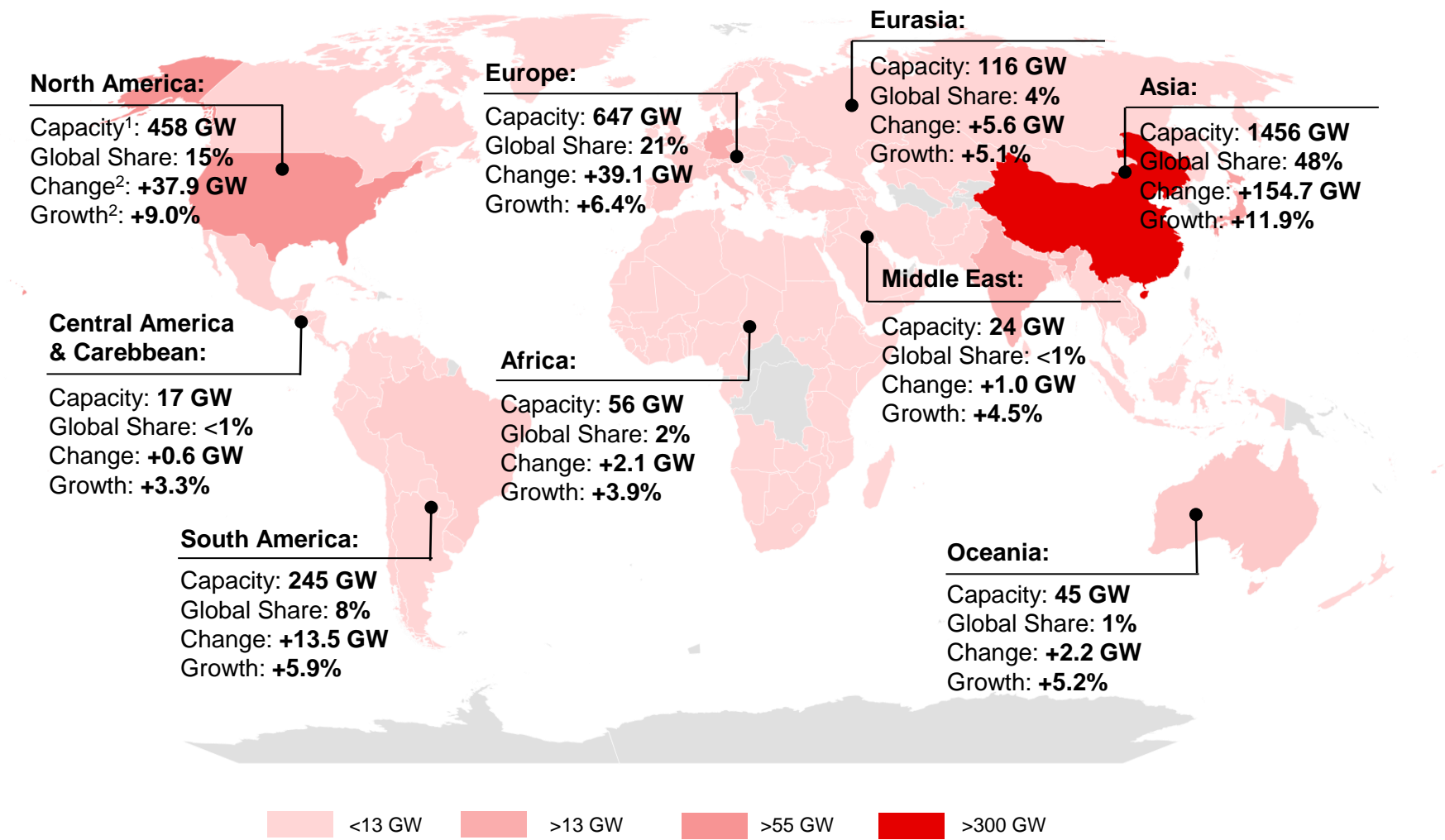


Porter's five forces

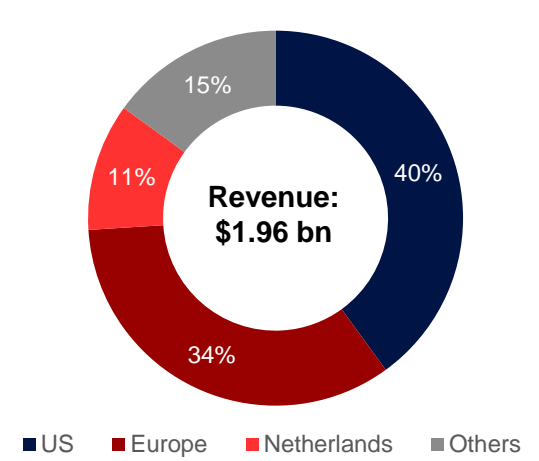
- High degree of rivalry** through fierce industry competitors, engaging in competitive actions to gain market share.
- Buyer power** is moderate. Quality of products is important to buyers, implying lower price sensitivity of buyers in the PV industry.
- Low **supplier power** through fairly standardized products and no credible threat towards forward-integration.
- Low **threat of new entrants** due to high capital requirements and high product differentiation.
- Low **threat of substitution** due to non-availability of reasonable product substitutes in regard to ecological and economic viability.

SolarEdge’s presence in high-growth regions provides solid market opportunities

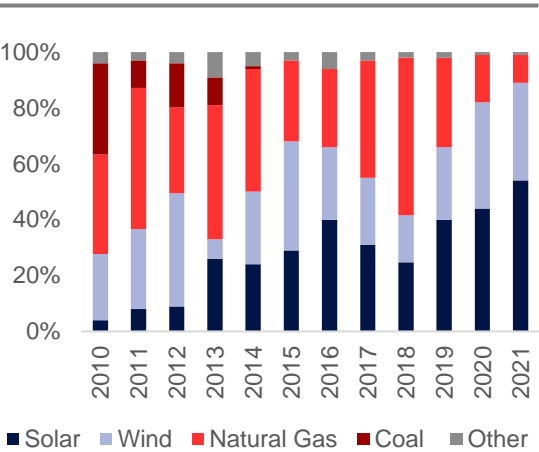
Installed solar capacity by country/region in 2021



SolarEdge revenue by region

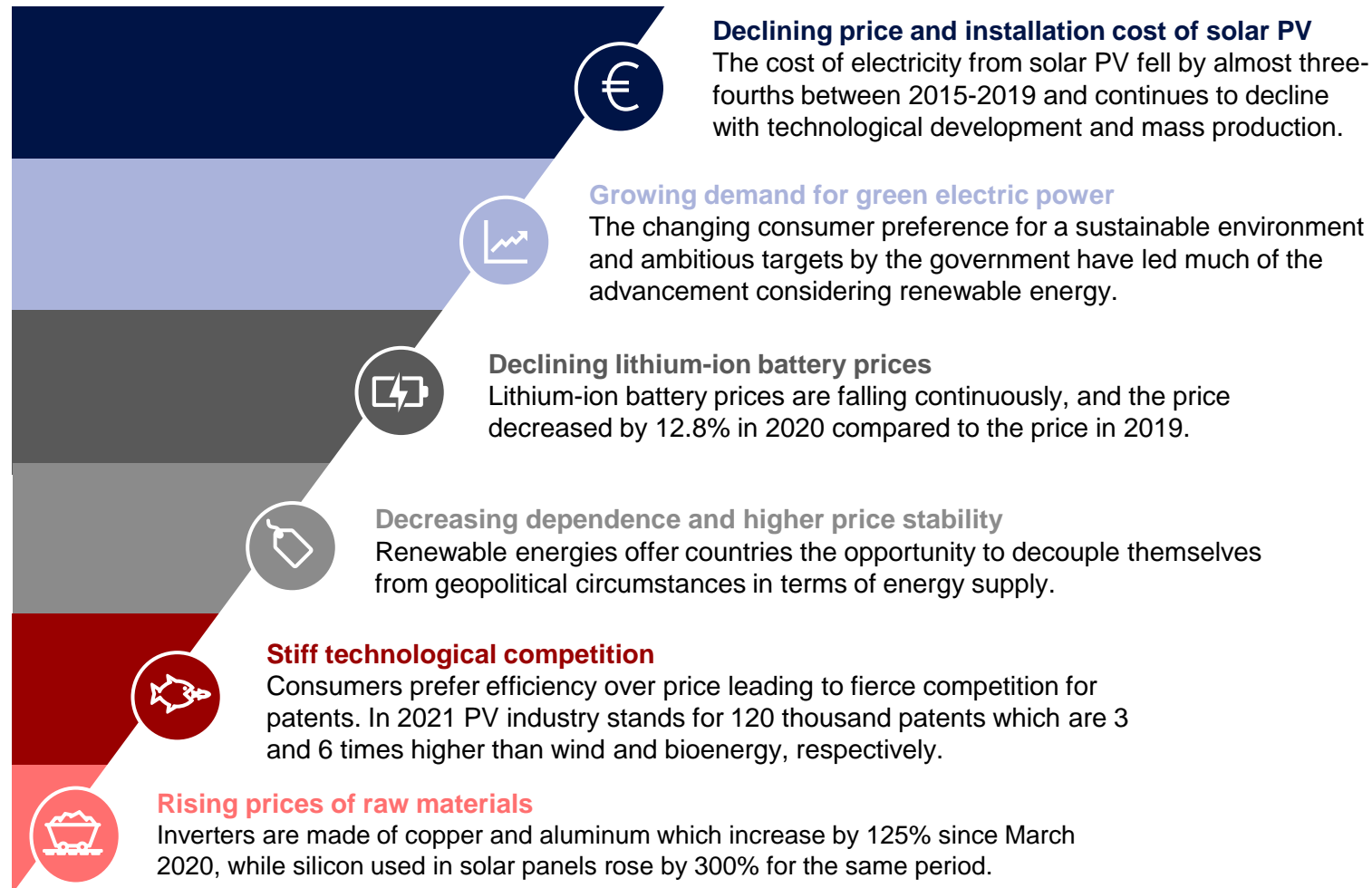


New US capacity additions

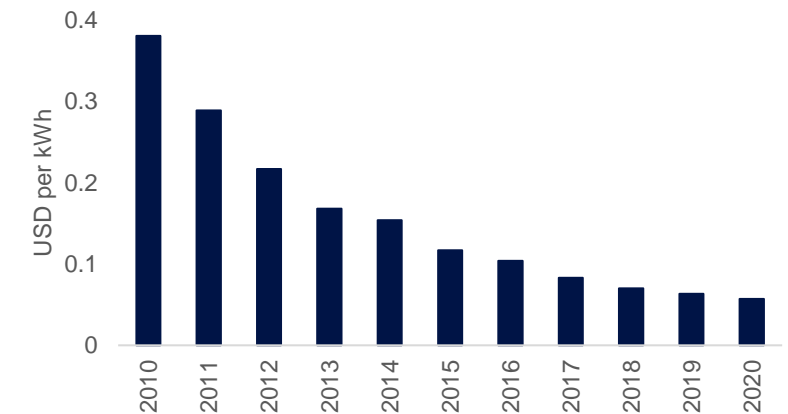


Continuous technological advancements lead to broader adoption of PV and battery technology

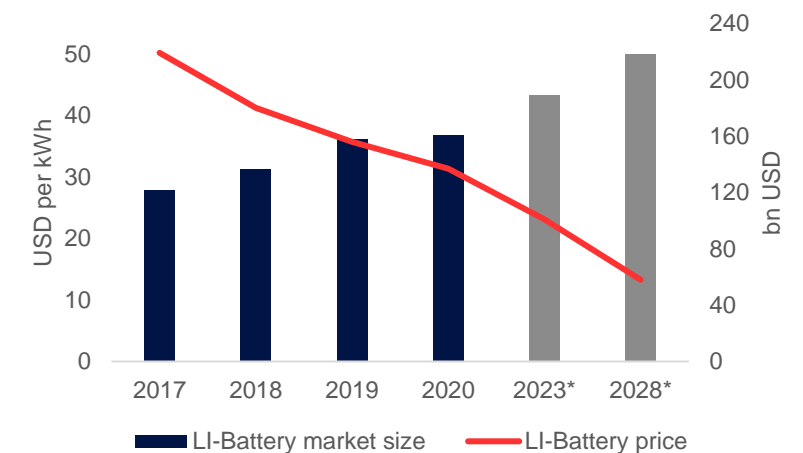
Trends and drivers

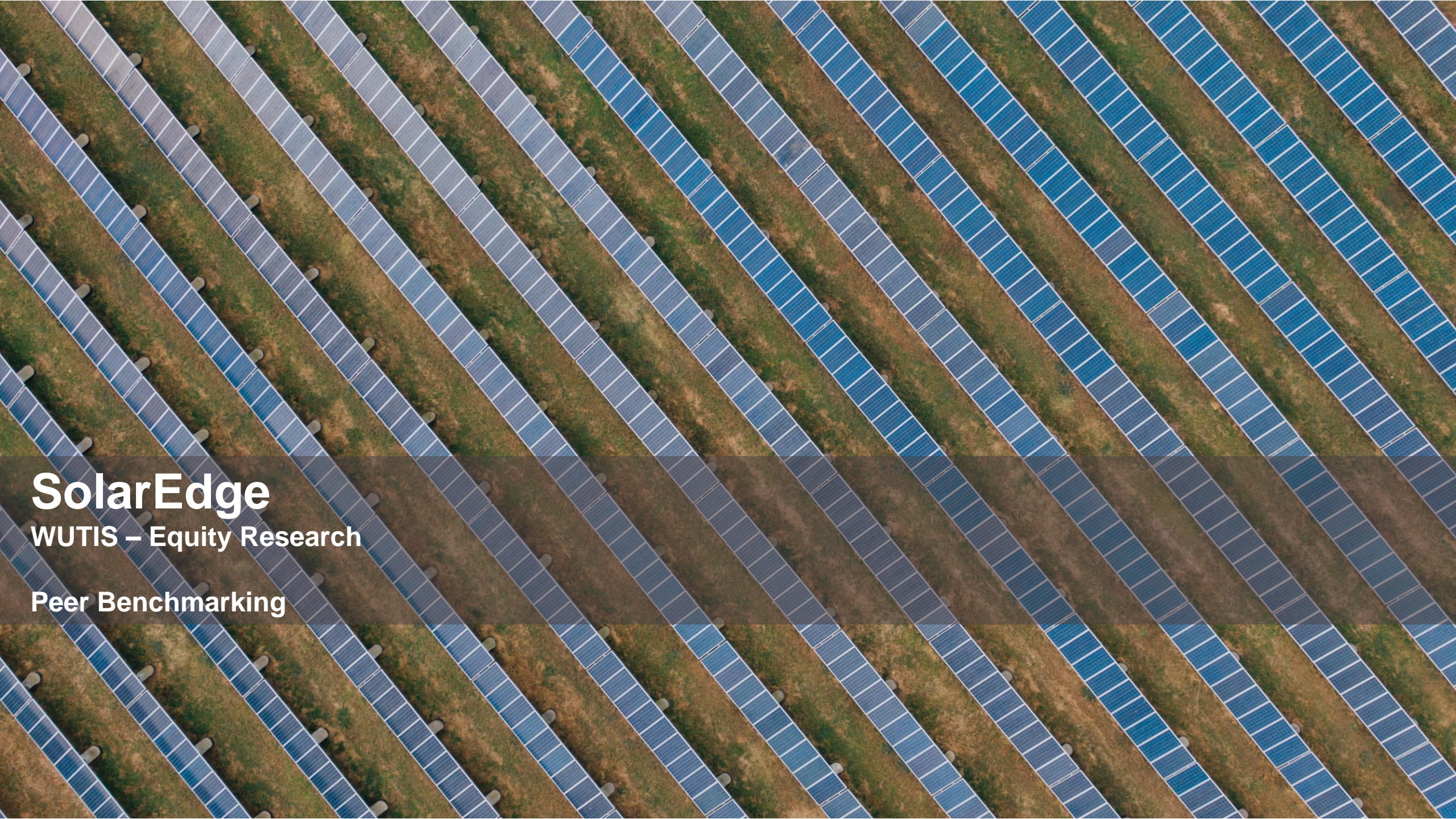


Cost of solar



Cost & market share of lithium-ion batteries





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Peer Benchmarking




Peer Group Analysis

The PV market has only a handful prominent inverter producers

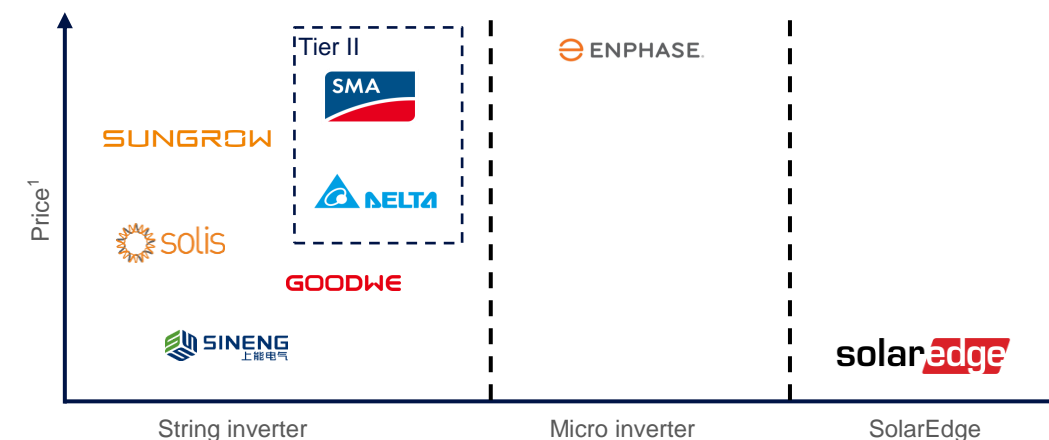
Peer group overview

Tier I	
 	 
	
Tier II	
	
Selected other important inverter producers (not included)	
Other focus area	Private
  	   

Peer group selection information

- 
Photovoltaic industry
 Only companies that are primarily operating in the PV industry and are publicly traded were considered for the peer group.
- 
Focus on inverter, software and energy storage
 The Tier I peer group only includes companies that concentrate on the same product portfolio as SolarEdge.
- 
Common theme
 Companies similar in size are considered for the CCA, firms with negative metrics were excluded, to not distort multiple valuation.

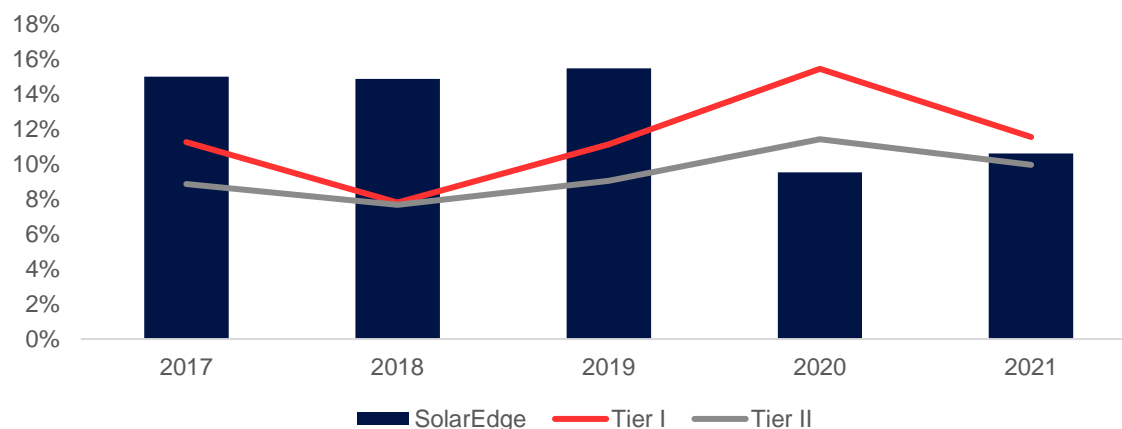
Inverter price per typology



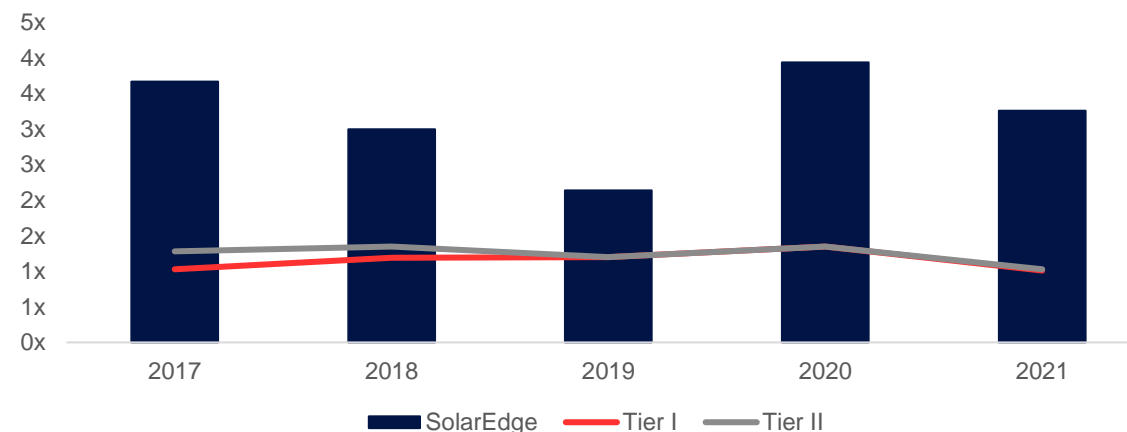
Comparable Benchmarking

Industry wide pressure on margins due to ongoing supply-chain issues

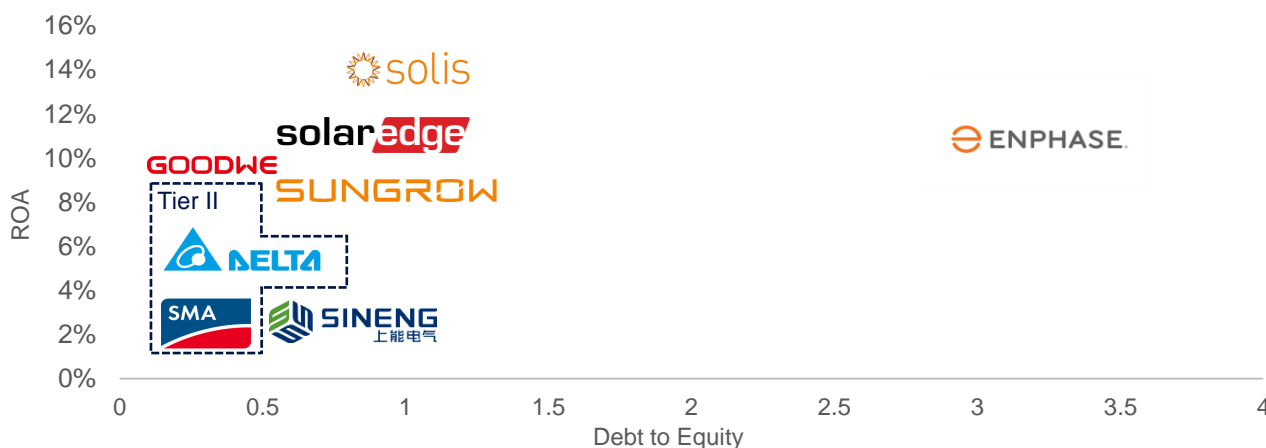
EBIT Margins decreased in 2020/21 due to increased purchasing prices



Liquidity – High quick ratio due to a increased cash position



Low interest free debt meets comparably high ROA



Margins
Decreased **industry wide** due to increasing purchasing prices and supply chain disruptions as a result of ocean freight capacity and shipping times.

Liquidity
The Issuance of bonds with **coupon of 0%** significantly increased the companies' liquidity.

Interest
SolarEdge does **not hold any interest-bearing liabilities**.



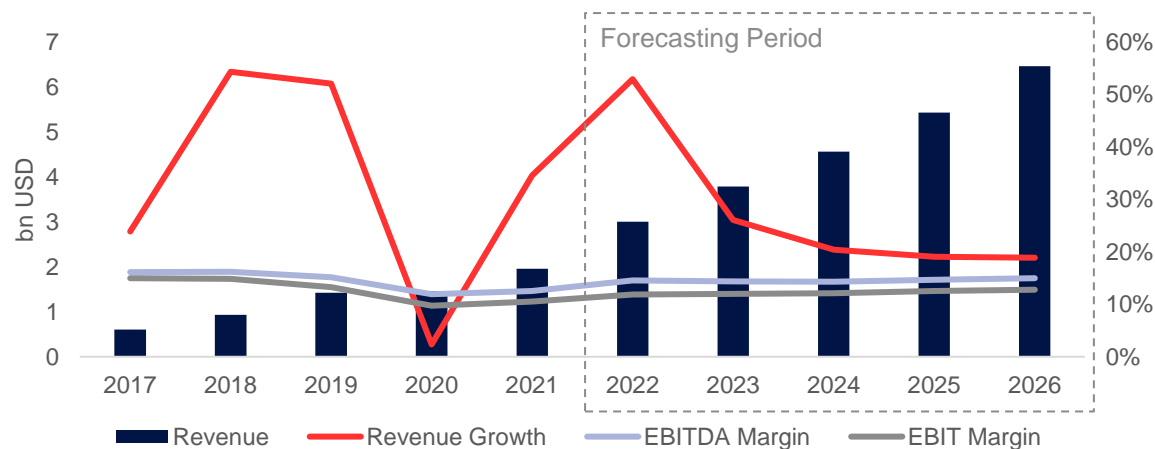
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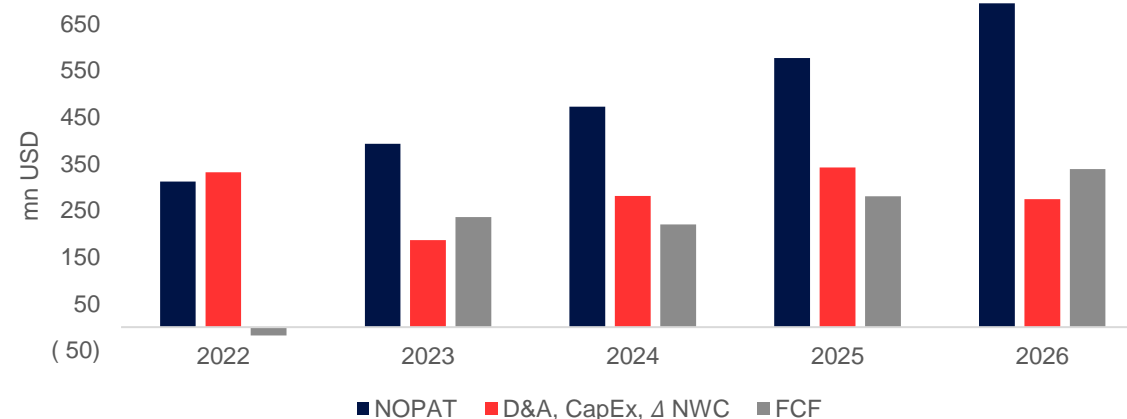
Valuation

Unique technological advantage promises increased market penetration in the future

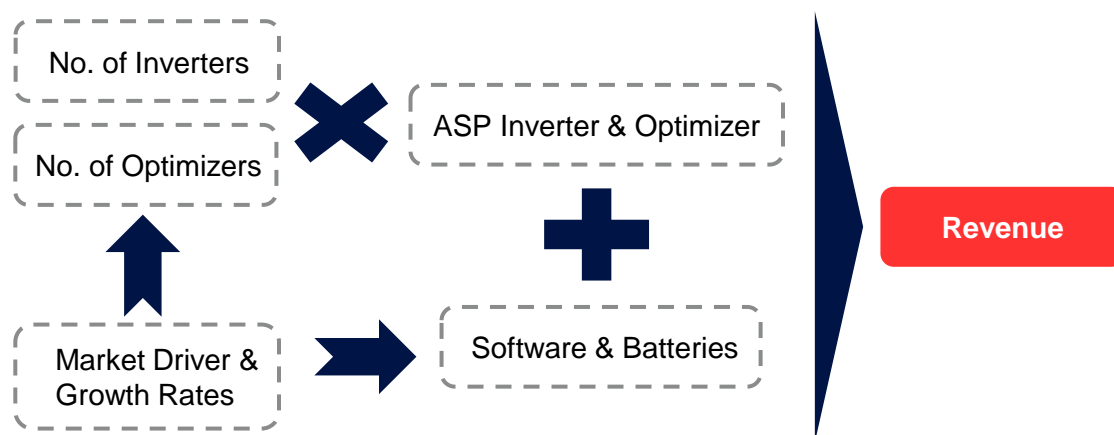
Revenue & margin development in the forecasting period



FCF composition



Revenue forecast approach



Assumptions for DCF valuation

Growth Rates: We expect continuous **high growth above the market** as SEDGs technology captures more market share each year.

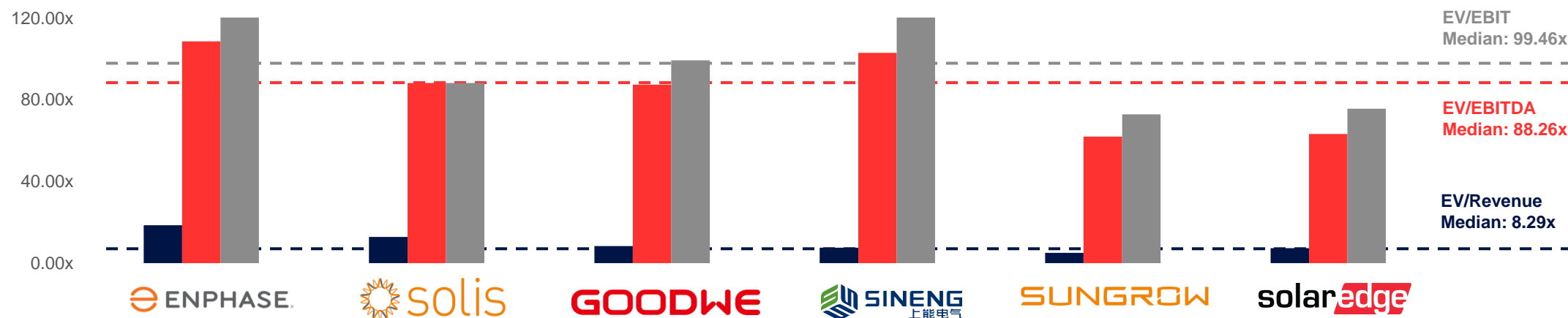
CapEx: Further investment into **new Battery Factory** in South Korea, ongoing expansion of **R&D equipment & machinery** and in-house productions

WACC: To account for changes in capital structure, risk premia and interest rates we used **separate WACCs** for the forecasting period and the terminal value

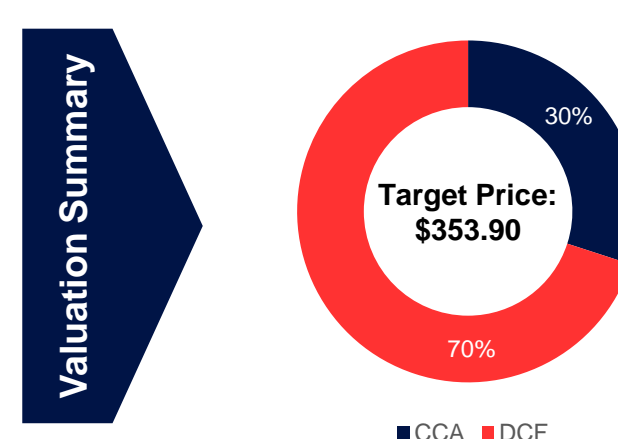
Valuation II

Despite recent stock price surges there is enough room further growth

Multiples Valuation



Valuation Summary





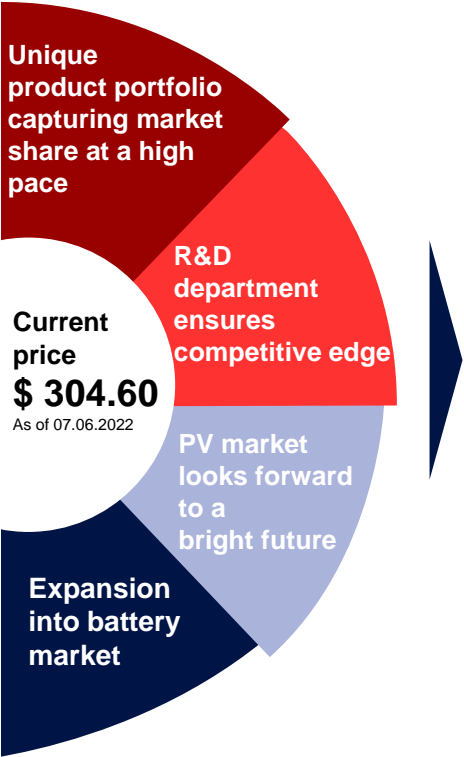
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Conclusion

Conclusion

Technological superiority coupled with a future oriented product portfolio promise significant upside potential










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Appendix

Appendix: Catalysts

Chips and lithium squeeze can have further negative impact on sales, whereas, industry may be subsidised

Catalyst	Type	Influenced factor	Estimated impact on share price
Semiconductor Chip Shortage	Hard	Revenue COGS	<ul style="list-style-type: none"> Strong – Semiconductors are key components of SolarEdge operations. Chip industry surveys indicate inventory levels decreased from 40 to 5 since 2019 which may continue in 2022 and 2023. 
New governmental regulations and subsidies	Soft	Revenue	<ul style="list-style-type: none"> Medium – Announcement of renewables tax benefits as well as government support of energy transition may accelerate the growth of PV industry. 
Global lithium shortage and price increase	Hard	Revenue COGS	<ul style="list-style-type: none"> Strong – Lithium being a key component in batteries widely used in PV industry increased by 438% in price since 2022. Additionally, lithium extraction cannot catch up with global demand. 
Sustainability goals	Soft	Revenue Operations	<ul style="list-style-type: none"> Low – Achieving Net Zero by 2050 may drive additional investments in PV industry. Targets presented by external advisors specify solar energy as a key source among renewables. 
IP infringements	Hard	Revenue Reputation	<ul style="list-style-type: none"> Medium – Patent infringement with Huawei creates reputational damage. SolarEdge operates in the industry with high probabilities of lawsuits, therefore, future cases are possible. 

Appendix: Company Specific Risks

Competition for technology and contract manufacture dependency are key risks for SolarEdge

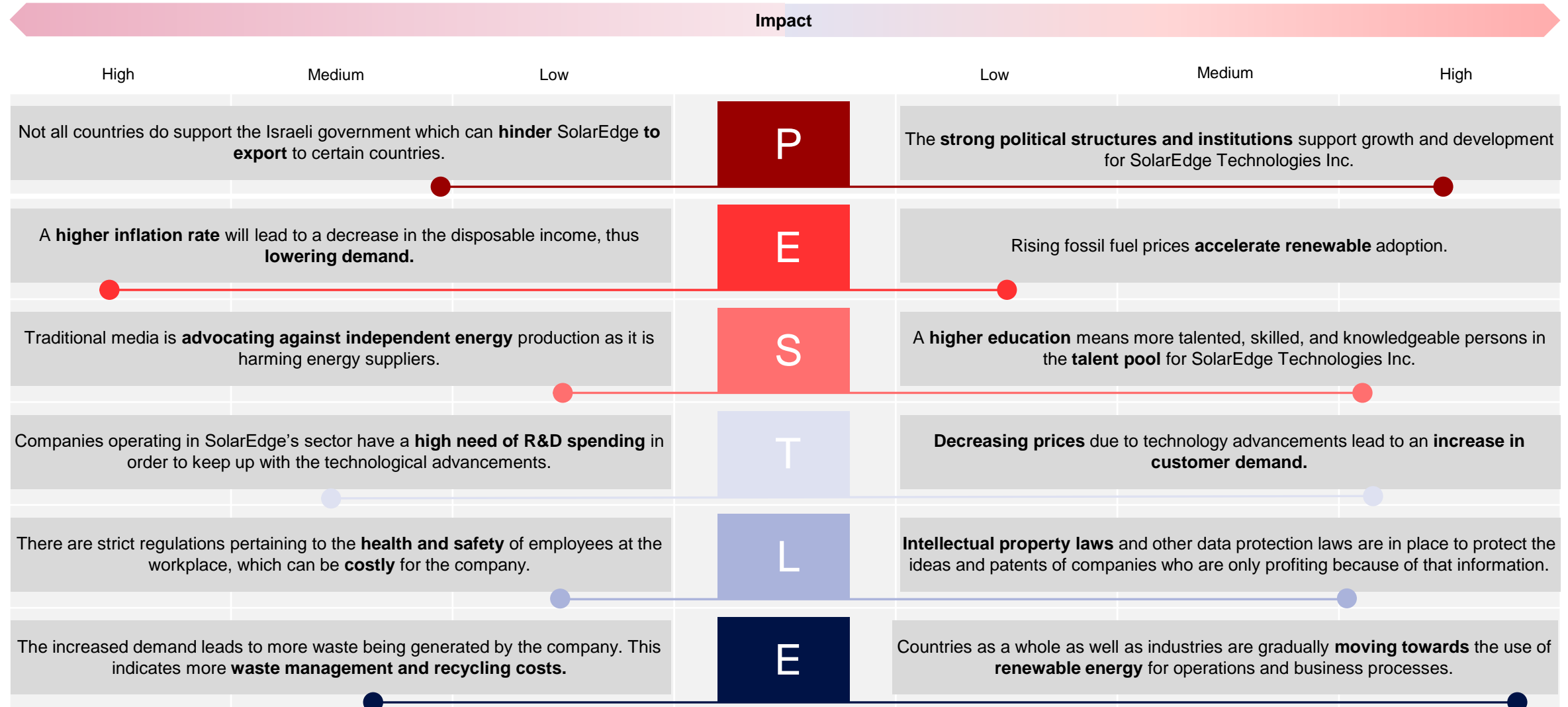
M1	As buyers value efficiency and technology the most there is a fierce industry competition for patents
M2	Other renewable energy sources (e.g. hydrogen) become more efficient and therefore the primary source of sustainable energy
M3	Countries decide to withdraw government subsidy for the solar energy industry
O1	High dependence on contract manufactures can limit future growth and poses non-influenceable operational risks when suppliers do not deliver
O2	Decreasing margins due to increased prices in raw material , which potentially cannot be passed on to consumers
O3	A lack of new talent for the research and development department could lead to competitors catching up on SolarEdge's technology
L1	Competitive edge partly based on patents which need to be protected and enforced across jurisdictions

Market (M) – Operations (O) – Legislation (L)



Appendix: PESTLE Analysis

SolarEdge is subjected to several risks and opportunities generated by the macro environmental factors



Appendix: Porters Five Forces

SolarEdge competitive advantage arises from a solid patent framework

Threat of new entrants

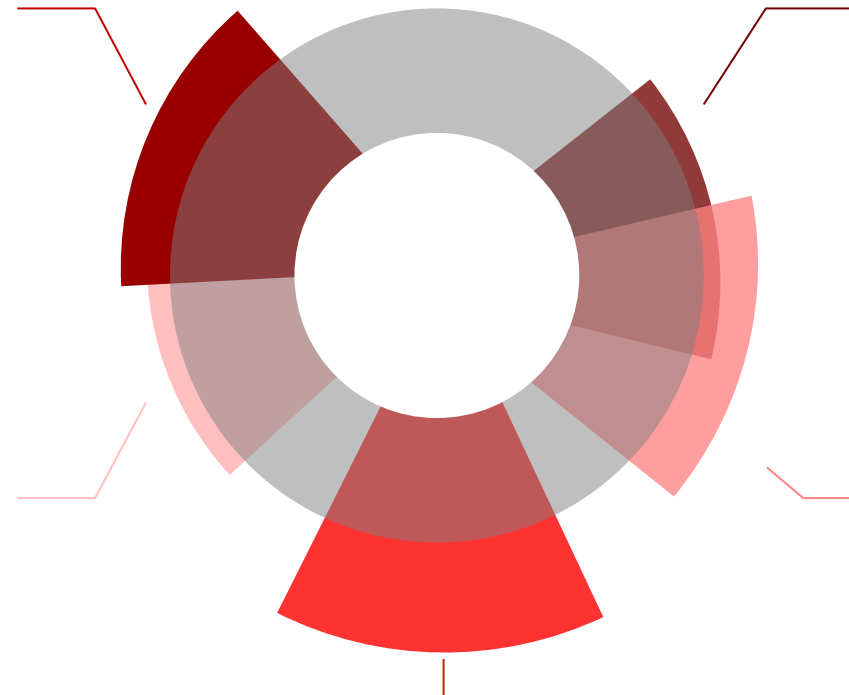
High capital requirements(-)
Challenging regulatory environment (-)
Economies of scale driven by solid Technological development (-)
High-growth market with juicy margins may attract new entrants(+)

LOW THREAT

Threat of substitution

Very few substitutes available(-)
High switching costs (-)
High product differentiation(-)
No ceiling for maximum profit(-)

LOW THREAT



Bargaining Power of Buyers

Consumers prefer quality over price meaning less price sensitivity (-)
The number of buyers significantly exceeds the number of suppliers(-)
High switching costs(-)

MODERATE POWER

Bargaining Power of Suppliers

Fairly standardized products (-)
No credible threat towards forward-integration (-)
Regulatory authorities support suppliers(+)
High product differentiation(-)

LOW POWER

Competitive Rivalry

Product differentiation limits the acquisition of new customers due to high fixed costs (+)
Fierce technology competition (+)
High exit barriers (+)
Government support of local firms puts pressure on foreign players (+)

HIGH DEGREE OF COMPETITION

Appendix: SWOT

Strengths and opportunities outweigh weaknesses and threats

STRENGTHS

- SolarEdge Technologies Inc has a large **strong distribution network** that makes sure that its products are available easily to a large number of customers in a timely manner.
- **Innovative teams** have allowed it to come up with new products and enter new markets. It has been successful in past, in most of the initiatives it has taken in new markets.
- The company has been successfully able to generate **positive returns** on the **capital expenditure** it has incurred on various projects in the past.
- The **low cost structure** helps it produce at a low cost and sell its products at a low price, making it affordable for its customers.

OPPORTUNITIES

- Technology comes with numerous benefits among many departments. **Operations** can be **automated to reduce costs**. Technology enables better data to be collected on customers and improves on marketing efforts.
- The population has been growing and is expected to grow at a positive rate for the upcoming years. This is beneficial for SolarEdge Technologies Inc as there will be an **increase** in the number of **potential customers** that it can target.
- More countries are emphasizing the **importance of green energy**.

- A significant proportion of the **property** that SolarEdge Technologies Inc owns is **rented rather than purchased**. It has to pay large amounts of rent on these adding to its costs.
- SolarEdge Technologies Inc has a **higher employee turnover rate compared to competitors**. This means that it has more people leaving the job, and as a result, it is spending more on training and development as employees keep leaving and joining.

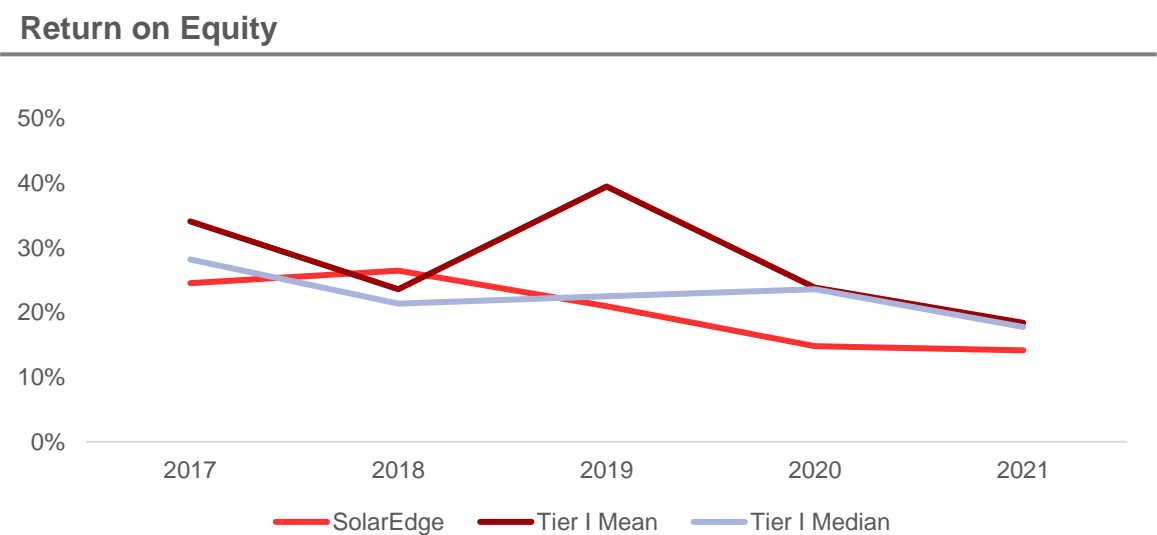
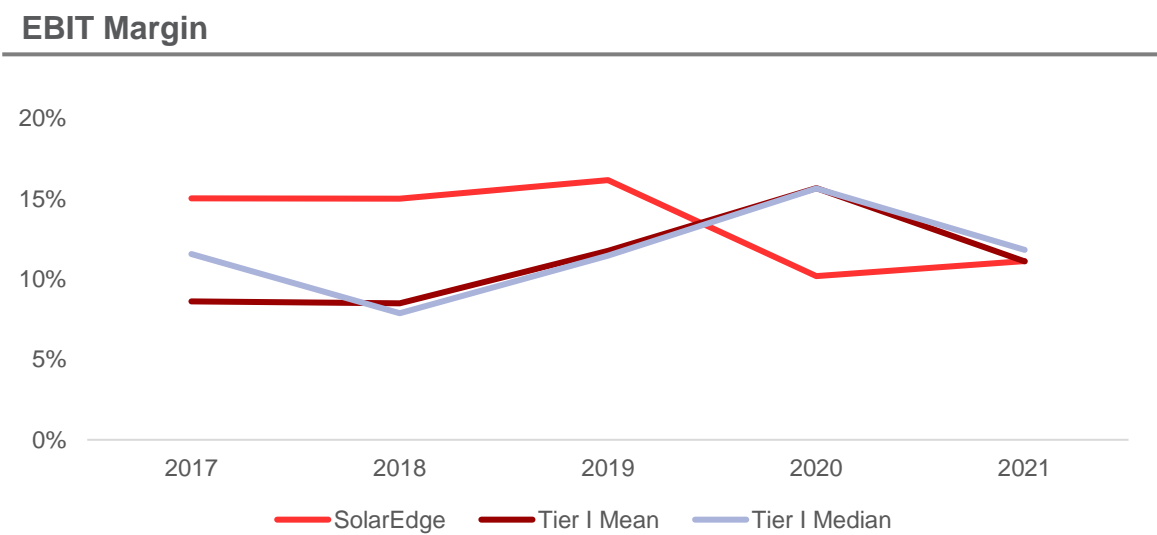
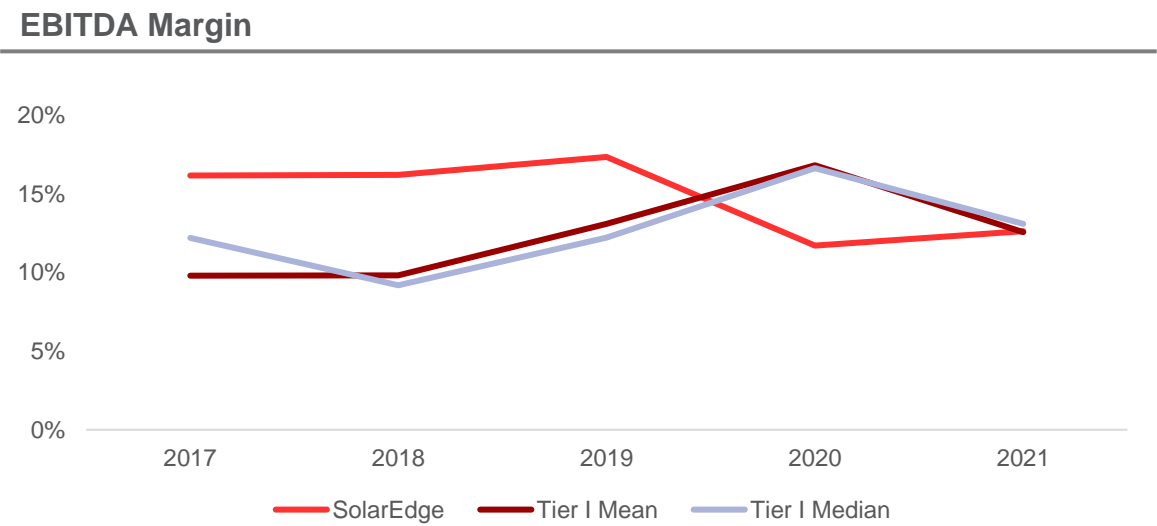
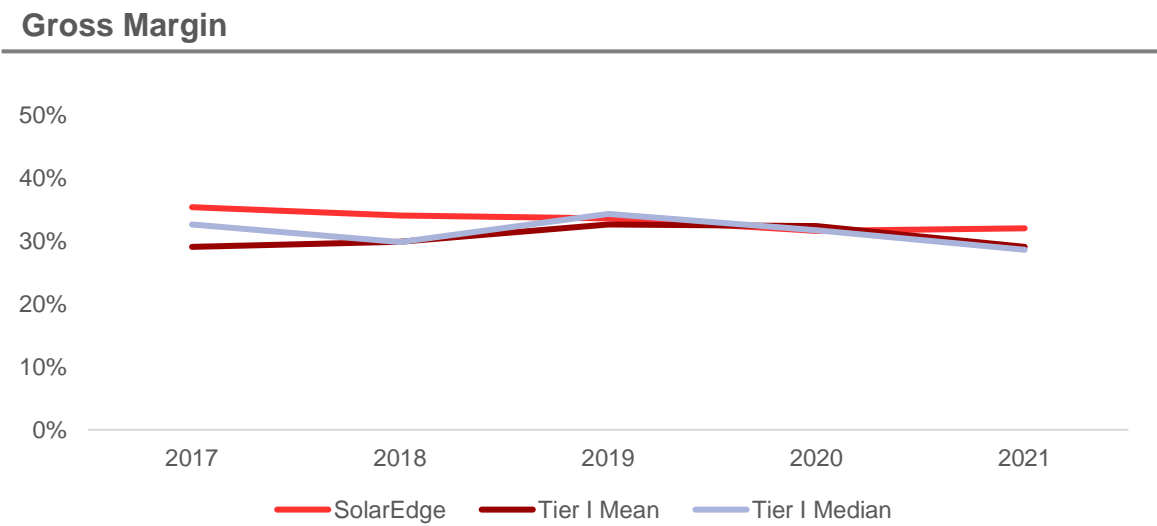
WEAKNESSES

- There has been an **increase in competition** within the industry putting downward pressure on prices.
- The **fluctuating interest rates** do not provide a stable financial and economic environment.
- **Material costs have increased** as other industries that provide inputs for this company also have suffered from increasing fuel prices, thereby charging more.

THREATS

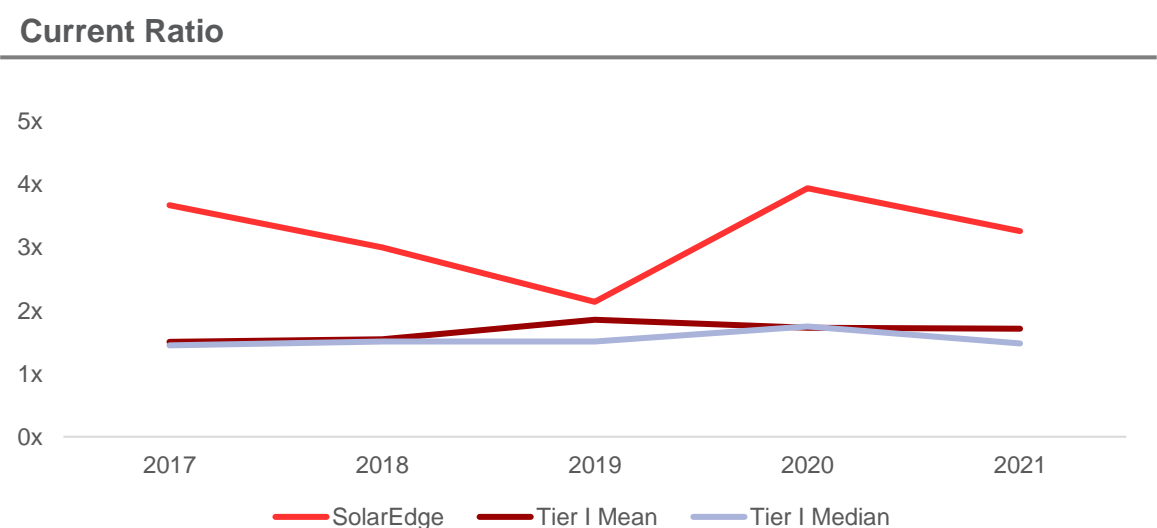
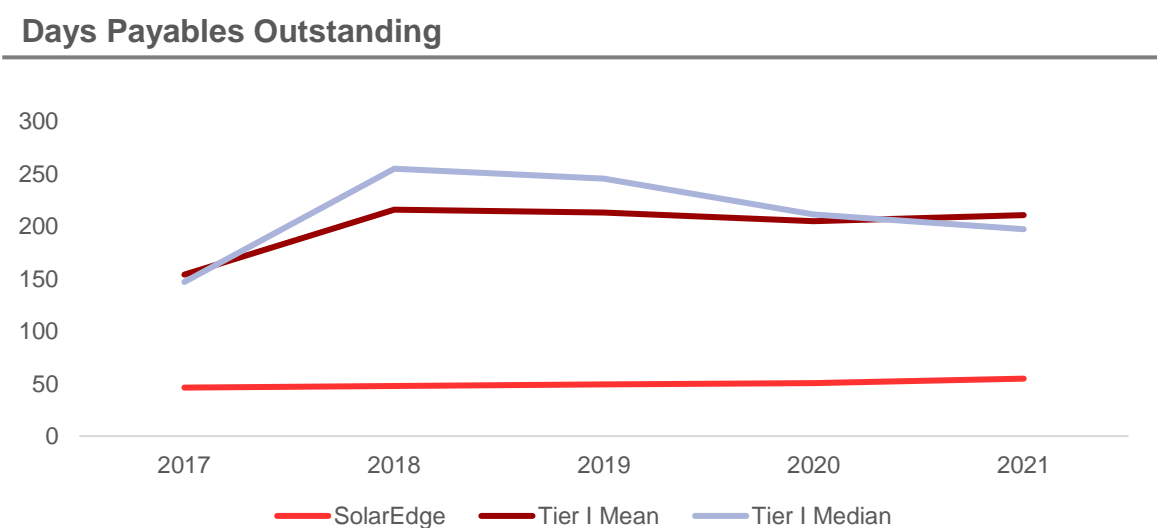
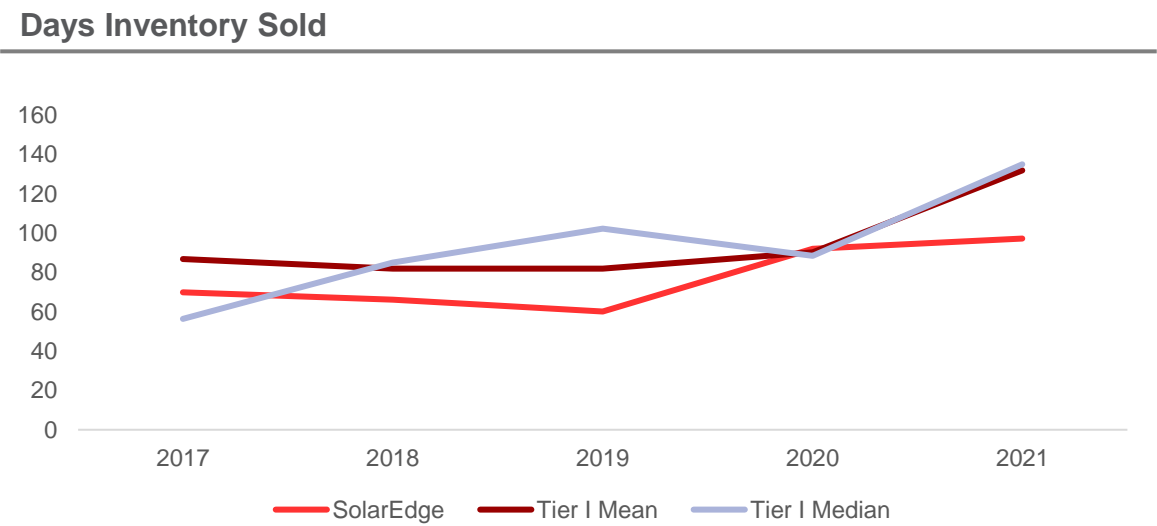
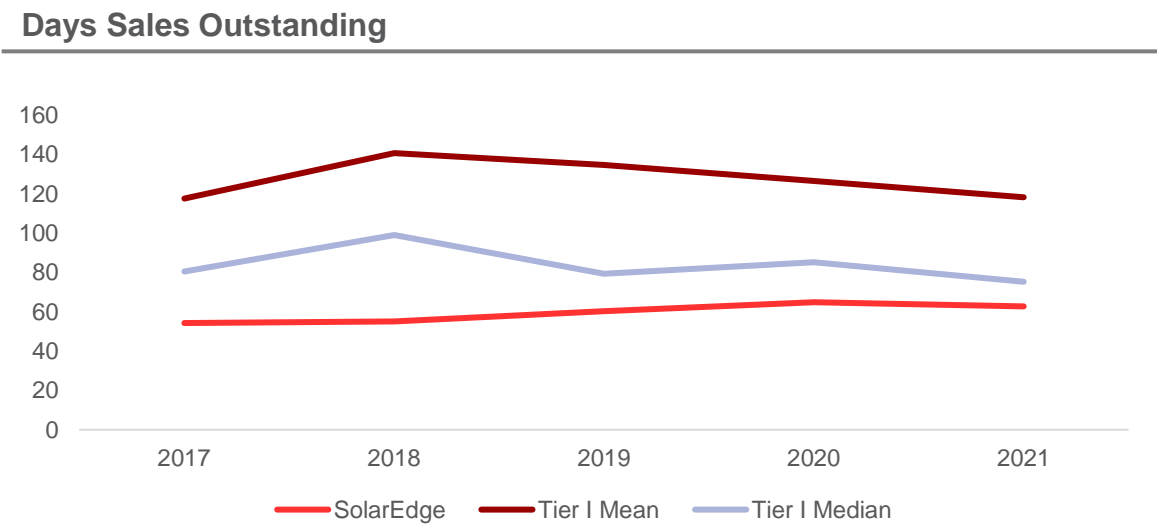
Appendix: Peers I

The pre-pandemic margin performance of SolarEdge is on track for a comeback



Appendix: Peers II

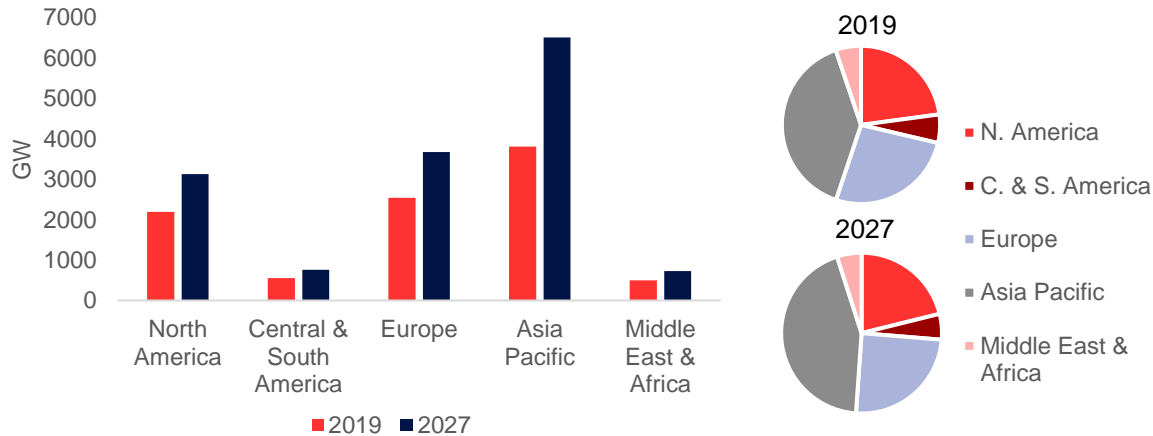
SolarEdge performs better in working capital ratios but maintains high levels of cash



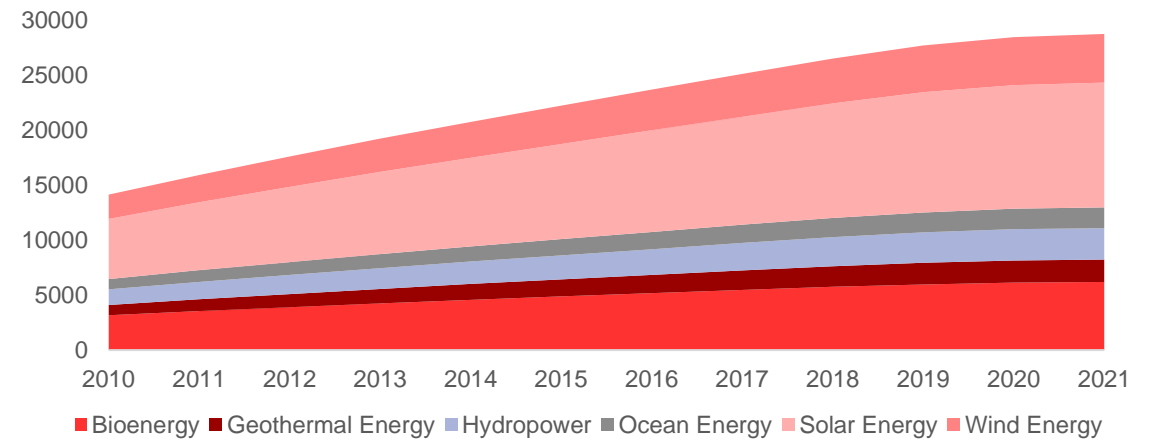
Appendix: Market Overview I

PV installation costs are decreasing due to a fall in EPC costs driven by solid technology development

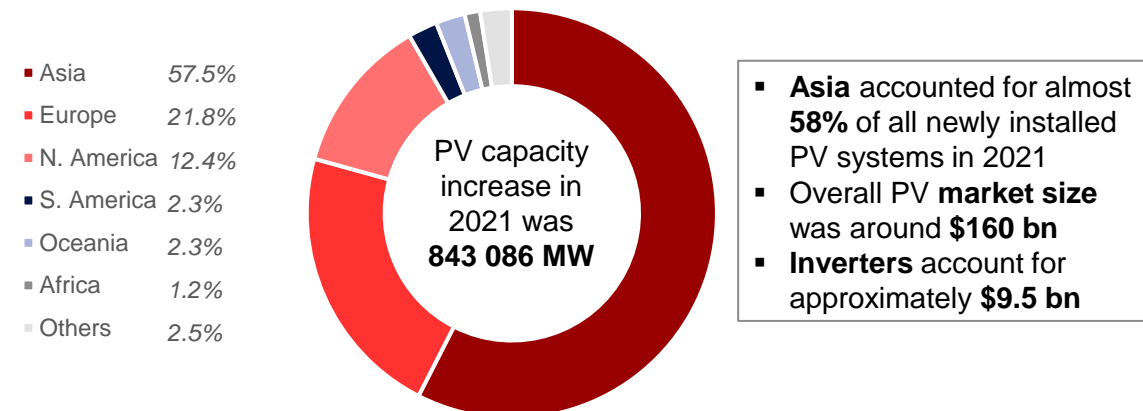
Installed solar capacity



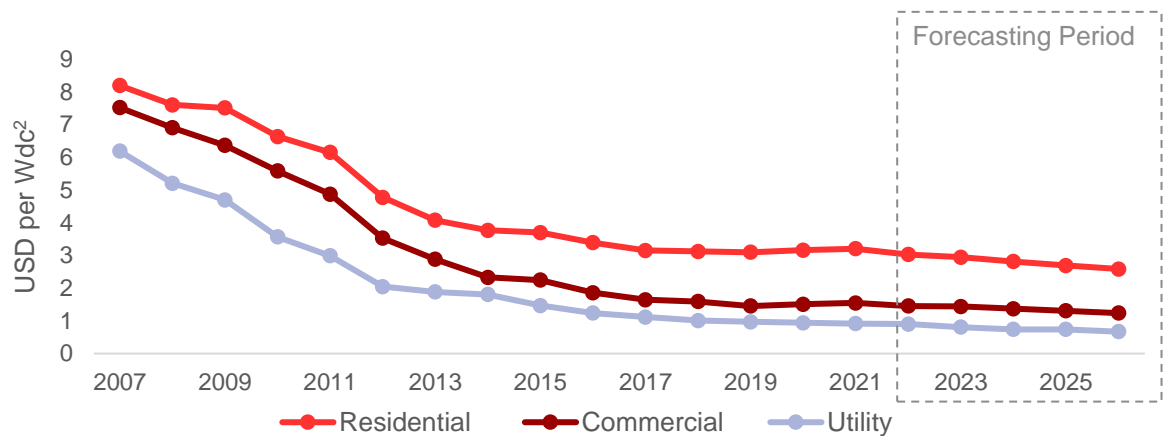
Cumulative patent filings in renewables industry by energy source



Newly installed PV systems per regions in MW

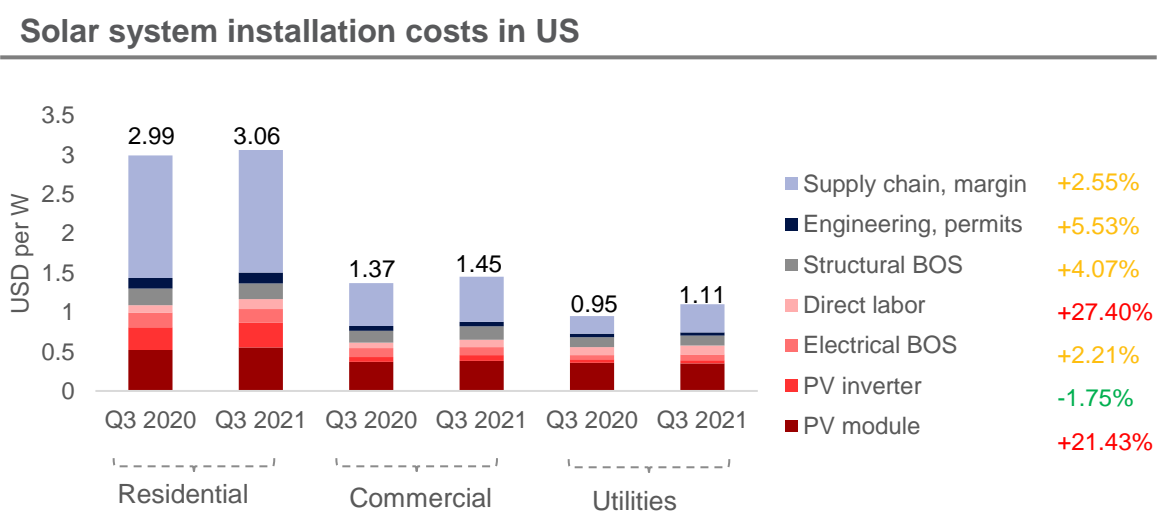
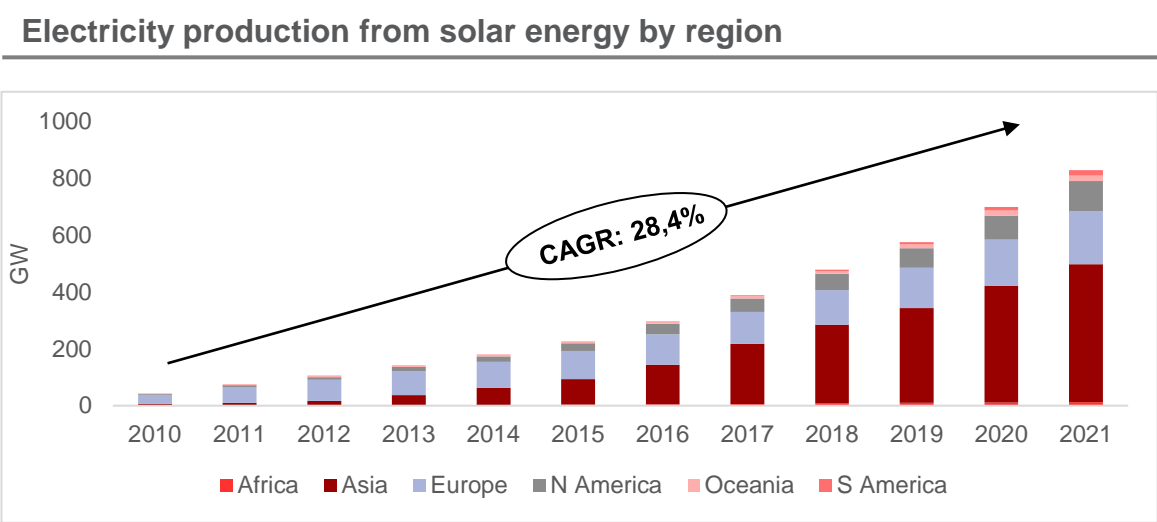
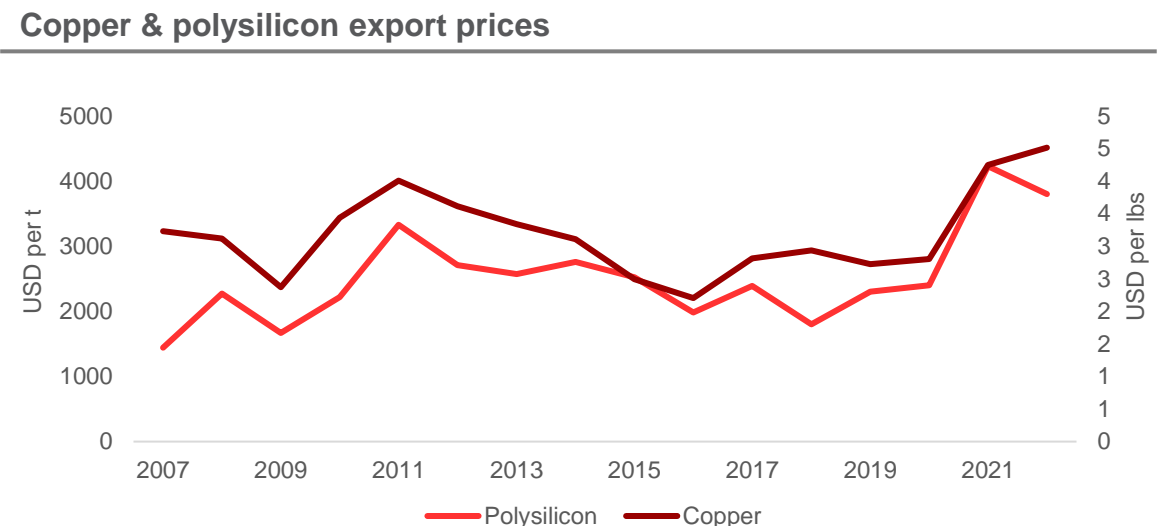
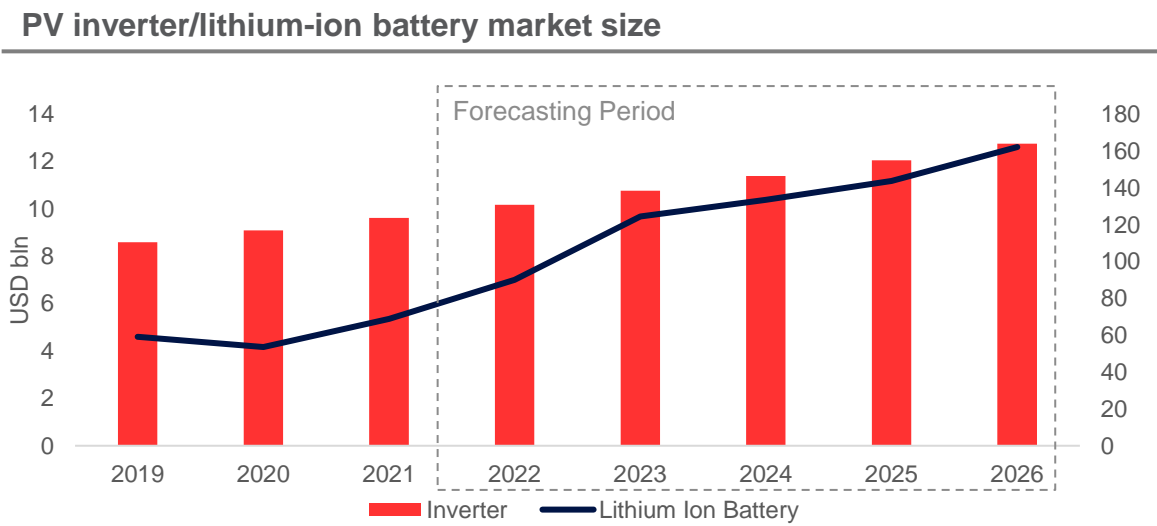


PV turnkey EPC¹ pricing by market segment in US



Appendix: Market Overview II

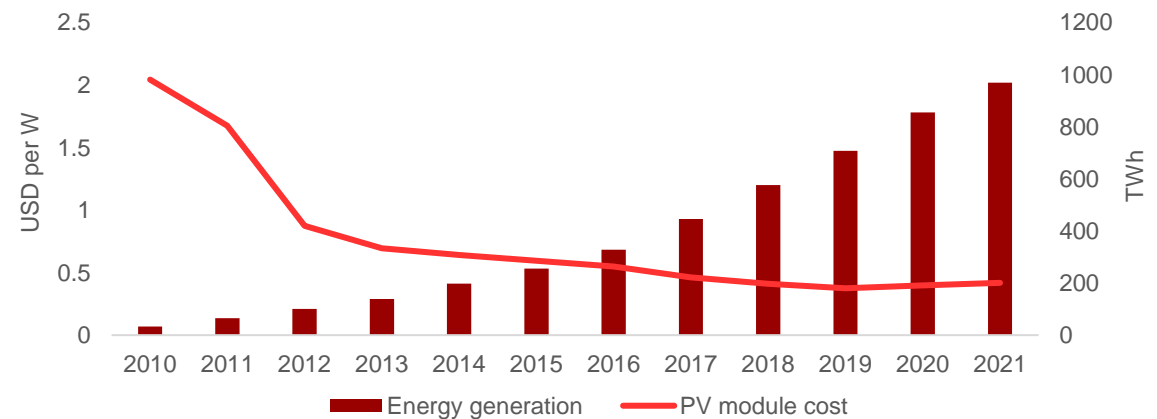
PV market growth slowed down in 2021 due to rising raw materials costs which impacted PV modules prices



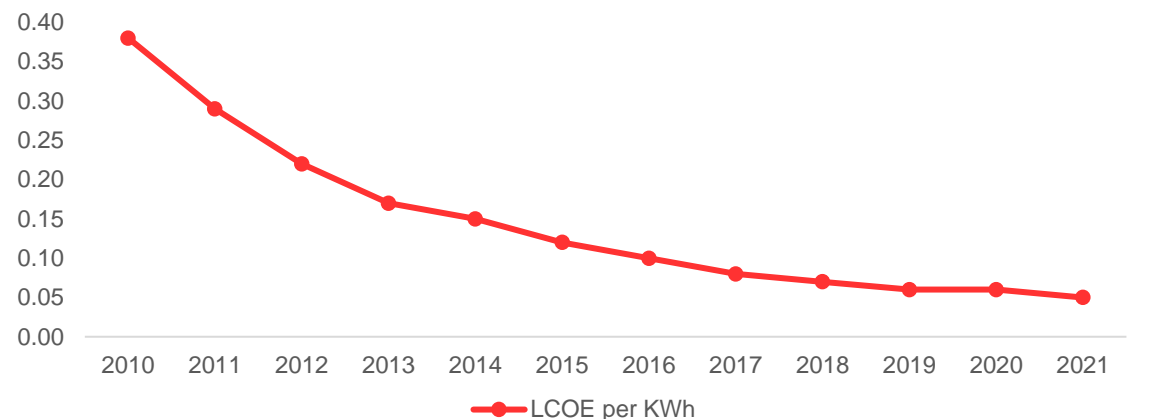
Appendix: Market Overview III

Steady investments in solar PV is driven by regular drop in net present cost of electricity generation

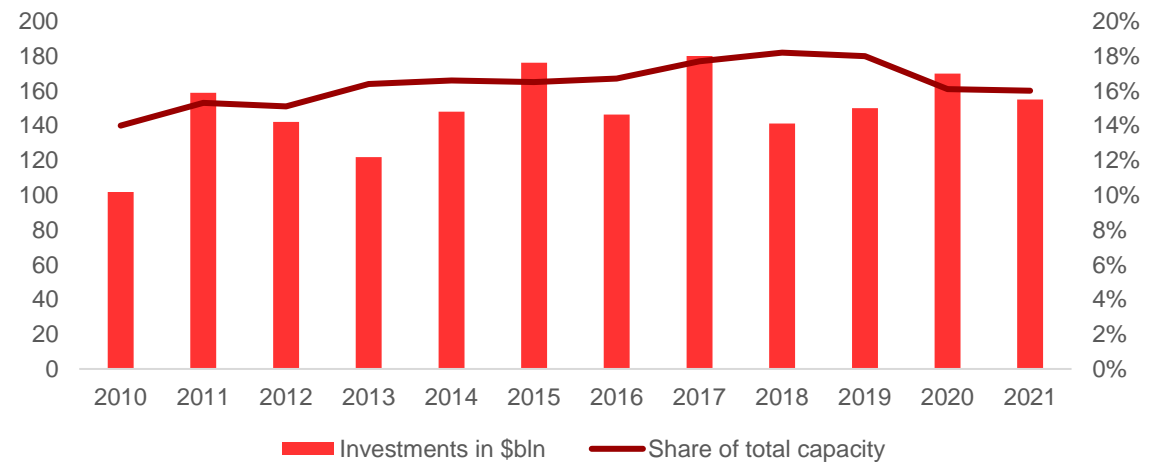
PV module costs & solar energy generation



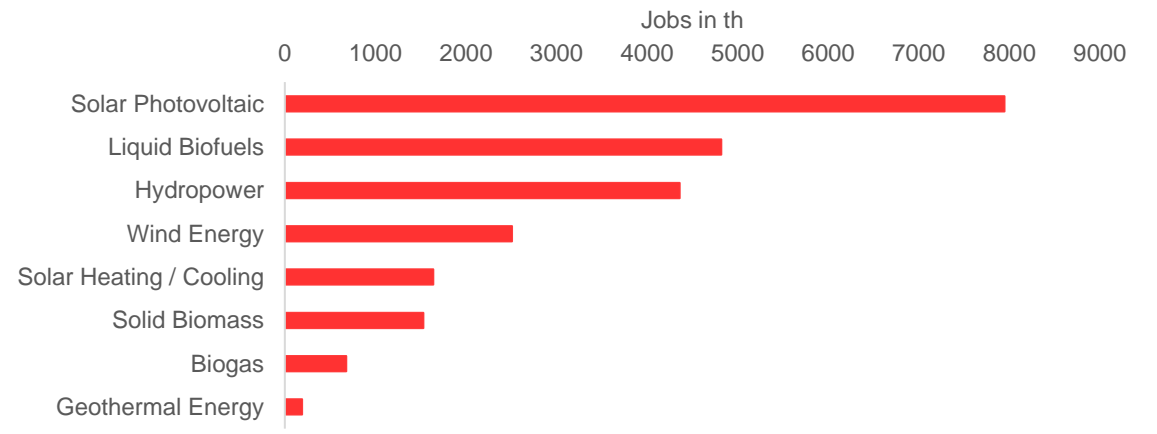
PV modules Levelized Cost of Energy (LCOE)



Solar investments & share of renewables capacity



Jobs available in renewables industry in 2021



Appendix: Valuation I

Income statement

in thousands of \$	Historical Results					Forecasting Period				
Operating Model	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Income Statement										
Revenues	607 045	937 237	1 425 660	1 459 271	1 963 865	3 004 368	3 789 568	4 564 813	5 436 177	6 465 312
Cost of Revenues	392 279	618 001	946 322	997 912	1 334 547	2 017 852	2 524 470	3 016 115	3 562 564	4 202 453
Gross Profit	214 766	319 236	479 338	461 359	629 318	986 515	1 265 098	1 548 699	1 873 613	2 262 859
Gross Margin	35,38%	34,06%	33,62%	31,62%	32,04%	32,84%	33,38%	33,93%	34,47%	35,00%
Operating Expenses:										
Research & Development	54 966	82 245	121 351	163 123	219 633	327 583	423 215	522 153	636 900	775 837
Sales & Marketing	50 032	68 307	87 984	95 985	119 000	188 359	237 587	287 311	338 300	404 990
General & Administrative	18 682	29 264	49 361	63 119	82 196	113 381	149 186	185 119	216 787	254 634
Other Operating Income (Expenses)	-	-	30 696	(3 429)	1 350	0	0	0	0	0
Operating Income	91 086	139 420	189 946	142 561	207 139	357 192	455 110	554 116	681 626	827 398
Operating Margin	15,00%	14,88%	13,32%	9,77%	10,55%	11,89%	12,01%	12,14%	12,54%	12,80%
EBITDA	98 241	152 039	216 841	174 395	246 674	437 129	543 939	651 658	796 485	964 733
EBITDA Margin	16,18%	16,22%	15,21%	11,95%	12,56%	14,55%	14,35%	14,28%	14,65%	14,92%
Financial Income (Expenses)	(9 158)	2 297	11 343	21 105	(19 915)	(21 796)	0	0	0	0
Income Taxes	16 072	9 077	33 646	23 344	18 054	44 704	54 936	73 167	85 217	100 527
Non-controlling Interests	-	782	1 592	-	-	-	-	-	-	-
Net Income	84 172	128 833	146 549	140 322	169 170	290 692	400 173	480 949	596 408	726 871
Net Income Margin	13,87%	13,75%	10,28%	9,62%	8,61%	9,68%	10,56%	10,54%	10,97%	11,24%

Appendix: Valuation II

Balance sheet

in thousands of \$ Operating Model	2017	2018	Historical Results 2019	2020	2021	2022	2023	Forecasting Period 2024	2025	2026
Balance Sheet										
Assets										
Current Assets	476,686	677,309	932,763	1,719,341	1,711,291	2,836,749	3,388,337	4,039,934	4,213,670	5,142,184
Cash and cash equivalents	163,163	187,764	223,901	827,146	530,089	1,251,075	1,638,003	2,001,687	1,893,194	2,561,737
Short-term bank deposits	-	9,870	5,010	-	-	-	-	-	-	-
Restricted bank deposits	1,516	824	27,558	-	-	-	-	-	-	-
Marketable securities	77,264	118,680	91,845	143,687	167,728	167,728	167,728	167,728	167,728	167,728
Trade receivables	109,528	173,579	298,383	218,706	456,339	663,212	686,669	794,057	898,351	1,068,420
Inventories	82,992	141,519	170,798	331,696	380,143	499,734	562,681	638,651	716,642	752,371
Prepaid expenses and other current assets	42,223	45,073	115,268	198,106	176,992	254,999	333,255	437,811	537,754	591,928
Non-current Assets	164,619	287,163	561,861	717,768	1,180,769	1,284,428	1,405,105	1,546,320	1,703,471	1,876,790
Marketable securities	103,120	74,256	119,176	147,434	482,228	482,228	482,228	482,228	482,228	482,228
Deferred tax assets	8,340	14,699	16,298	11,676	27,572	27,572	27,572	27,572	27,572	27,572
Property, plant and equipment	51,182	119,329	176,963	303,408	410,379	514,038	634,715	775,930	933,081	1,106,400
Operating lease right-of-use assets	-	-	35,858	41,600	47,137	47,137	47,137	47,137	47,137	47,137
Intangible assets	1,115	38,504	74,008	67,818	58,861	58,861	58,861	58,861	58,861	58,861
Goodwill	-	34,874	129,654	140,479	129,629	129,629	129,629	129,629	129,629	129,629
Other long-term assets	862	5,501	9,904	5,353	24,963	24,963	24,963	24,963	24,963	24,963
Total Assets	641,305	964,472	1,494,624	2,437,109	2,892,060	4,121,176	4,793,442	5,586,254	5,917,140	7,018,973
Liabilities										
Current Liabilities	129,754	225,718	436,714	436,099	525,181	676,657	830,416	1,026,160	1,219,560	1,452,380
Trade payables	69,488	107,079	157,148	162,051	252,068	350,193	436,302	562,974	698,220	864,812
Current Maturities of bank loans	-	16,639	15,673	-	-	-	-	-	-	-
Employees and payroll accruals	22,544	29,053	47,390	63,738	74,465	109,943	138,266	171,561	209,031	241,845
Warranty obligations	14,785	28,868	65,112	62,614	71,480	67,259	87,348	107,905	129,193	149,197
Deferred revenues and customers advances	2,559	14,351	70,815	24,648	17,789	39,882	59,122	74,341	73,736	87,147
Accrued expenses and other current liabilities	20,378	29,728	80,576	123,048	109,379	109,379	109,379	109,379	109,379	109,379
Non-current Liabilities	114,084	168,028	246,240	915,253	1,056,840	1,157,677	1,276,010	1,392,129	933,208	1,075,349
Convertible senior notes/(Bank loans for 2018/19)	-	3,510	173	573,350	621,535	621,535	621,535	621,535	0	0
Warranty obligations	64,026	92,958	107,451	142,380	193,680	244,242	298,180	354,798	446,275	521,117
Deferred revenues	31,453	60,670	89,982	115,372	151,556	201,831	266,226	325,728	396,864	464,163
Finance lease liabilities	-	-	-	26,173	40,508	40,508	40,508	40,508	40,508	40,508
Operating lease liabilities	-	-	30,213	35,194	38,912	38,912	38,912	38,912	38,912	38,912
Other long-term liabilities	18,605	10,890	22,784	10,649	10,649	10,649	10,649	10,649	10,649	10,649
Total Liabilities	243,838	393,746	682,954	1,351,352	1,582,021	1,834,334	2,106,427	2,418,289	2,152,767	2,527,730
Equity										
Share Capital	4	5	5	5	5	6	6	6	6	6
Additional paid-in capital	331,902	371,794	475,792	603,891	687,295	1,373,405	1,373,405	1,373,405	1,373,405	1,373,405
Accumulated other comprehensive income (loss)	(611)	(524)	(1,809)	3,857	(27,319)	(27,319)	(27,319)	(27,319)	(27,319)	(27,319)
Retained Earnings	66,172	191,133	337,682	478,004	650,058	940,750	1,340,923	1,821,872	2,418,281	3,145,152
Non-controlling interests	-	8,318	-	-	-	-	-	-	-	-
Total Equity	397,467	570,726	811,670	1,085,757	1,310,039	2,286,842	2,687,015	3,167,964	3,764,373	4,491,244
Total Liabilities & Equity	641,305	964,472	1,494,624	2,437,109	2,892,060	4,121,176	4,793,442	5,586,254	5,917,140	7,018,973

Appendix: Valuation III

Cash flow model

in thousands of \$	Historical Results					Forecasting Period				
Operating Model	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Cash Flow Statement										
Cash Flow from Operating Activities										
Net income	84,172	128,833	146,549	140,322	169,170	290,692	400,173	480,949	596,408	726,871
Adjustments for:										
Depreciation of property, plant and equipment	7,011	11,426	17,261	22,355	29,359	69,181	78,089	87,366	105,717	128,979
Amortization of intangible assets	144	1,193	9,634	9,479	10,176	10,755	10,741	10,176	9,142	8,356
Amortization of debt discount & debt issuance costs	-	-	-	3,185	2,903	0	0	0	0	0
Amortization of premium and accretion of discount c	2,061	1,242	92	1,168	9,462	0	0	0	0	0
Stock-based compensation expenses	17,564	30,618	60,353	67,309	102,593	34,107	0	0	0	0
Deferred income taxes	(5,455)	(7,093)	(6,037)	(2,738)	(12,045)	0	0	0	0	0
Exchange rate fluctuations and other items	-	-	-	3,860	20,697	0	0	0	0	0
Loss from sale of business	-	-	5,269	-	-	-	-	-	-	-
Other expenses (income)	(994)	551	713	-	-	-	-	-	-	-
Operating Cash Flow before changes in working capital										
Changes in:										
Inventories	(15,690)	(20,178)	(22,544)	(149,661)	(43,051)	(119,591)	(62,947)	(75,970)	(77,991)	(35,730)
Prepaid expenses and other assets	(20,943)	(2,711)	(67,323)	(3,276)	(39,444)	(78,007)	(78,257)	(104,556)	(99,944)	(54,173)
Trade receivables	(38,139)	(60,514)	(124,071)	86,538	(247,723)	(206,873)	(23,457)	(107,389)	(104,294)	(170,069)
Trade payables	35,455	31,482	47,837	3,333	91,709	98,125	86,109	126,672	135,246	166,592
Employees and payroll accruals	9,394	4,583	18,592	18,315	26,519	35,478	28,323	33,295	37,470	32,814
Warranty obligations	20,436	41,878	50,780	32,274	60,524	46,342	74,026	77,174	112,765	94,846
Deferred revenues and customers advances	14,106	37,041	83,137	(21,438)	29,936	72,368	83,635	74,721	70,531	80,710
Other liabilities	27,543	(8,485)	40,350	11,630	3,344	0	0	0	0	0
Net cash provided by operating activities	136,665	189,866	260,592	222,655	214,129	252,577	596,435	602,440	785,053	979,197
Cash Flow from Investing Activities										
Investment in available-for-sale marketable securitie	(143,675)	(142,627)	(160,054)	(223,705)	(579,377)	0	0	0	0	0
Proceed from sales and maturities of available-for-s	80,269	129,345	142,744	141,839	202,188	0	0	0	0	0
Investment in privately-held company	-	-	-	-	(16,643)	0	0	0	0	0
Purchase of property, plant and equipment	(21,382)	(38,608)	(72,562)	(126,790)	(149,251)	(172,840)	(198,766)	(228,581)	(262,868)	(302,298)
Purchases of other intangible assets and other asset	-	-	-	-	-	(10,755)	(10,741)	(10,176)	(9,142)	(8,356)
Withdrawal from (investment in) bank deposits	-	(9,870)	4,860	(54,752)	60,096	0	0	0	0	0
Withdrawal from (investment in) restricted bank dep	(619)	(112)	(26,145)	25,267	798	0	0	0	0	0
Business combinations, net of cash acquired	-	(94,737)	(38,435)	-	-	0	0	0	0	0
Other investing activities	-	-	(3,261)	1,504	(2,022)	0	0	0	0	0
Net cash used in investing activities	(85,407)	(156,609)	(152,853)	(236,637)	(484,211)	(183,595)	(209,507)	(238,757)	(272,010)	(310,654)
Cash Flow from Financing Activities										
Proceeds from second Public Offering	-	-	-	-	-	650,526	0	0	0	0
Repayment of bank loans/Convertible Senior Notes	-	(3,786)	(9,514)	(15,595)	(16,073)	0	0	0	(621,535)	0
Proceeds from exercise of stock-based awards and p	7,240	10,021	9,066	21,500	2,203	1,478	0	0	0	0
Proceeds from issuance of convertible senior notes	-	-	-	617,869	-	0	0	0	0	0
Proceeds from bank loans	-	-	249	16,944	-	0	0	0	0	0
Change in non-controlling interests	-	(14,190)	(71,486)	-	-	0	0	0	0	0
Other financing activities	-	-	(1,354)	(234)	(1,308)	0	0	0	0	0
Net cash provided (used in) financing activities	7,240	(7,955)	(73,039)	640,484	(15,178)	652,004	0	0	(621,535)	0
Increase (decrease) in cash and cash equivalents	58,498	24,515	33,126	626,502	(285,260)	720,986	386,928	363,683	(108,492)	668,543
Cash and cash equivalents at the beginning of the pe	104,683	163,163	187,764	223,901	827,146	530,089	1,251,075	1,638,003	2,001,687	1,893,194
Effect of exchange rate differences	(18)	86	3,011	(23,257)	(11,797)	0	0	0	0	0
Cash and cash equivalents at the end of the period	163,163	187,764	223,901	827,146	530,089	1,251,075	1,638,003	2,001,687	1,893,194	2,561,737

Appendix: Valuation IV

Free cash flow

in millions of € DCF Model	Historical Results						Forecasting Period			
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Revenues	607,045	937,237	1,425,660	1,459,271	1,963,865	3,004,368	3,789,568	4,564,813	5,436,177	6,465,312
Cost of revenues	392,279	618,001	946,322	997,912	1,334,547	2,017,852	2,524,470	3,016,115	3,562,564	4,202,453
Gross Profit	214,766	319,236	479,338	461,359	629,318	986,515	1,265,098	1,548,699	1,873,613	2,262,859
Operating Expenses	123,680	179,816	289,392	318,798	422,179	629,323	809,988	994,583	1,191,987	1,435,461
EBIT	91,086	139,420	189,946	142,561	207,139	357,192	455,110	554,116	681,626	827,398
Taxes	16,072	9,077	33,646	23,344	18,054	44,704	54,936	73,167	85,217	100,527
NOPAT	75,014	130,343	156,300	119,217	189,085	312,488	400,173	480,949	596,408	726,871
+Depreciation & Amortization	7,011	11,426	17,261	22,355	29,359	69,181	78,089	87,366	105,717	128,979
-CAPEX	21,382	38,608	72,562	126,790	149,251	172,840	198,766	228,581	262,868	302,298
+/- Change in Net Working Capital	(17,226)	(84,987)	(104,014)	(76,318)	(196,063)	(228,340)	(295)	(56,686)	(47,038)	(39,206)
Unlevered FCF	43,417	18,174	(3,015)	(61,536)	(126,870)	(19,510)	279,201	283,048	392,219	514,345
Present Value of Unlevered FCF						(17,946)	236,228	220,283	280,774	338,680

Appendix: Valuation V

Share Price

Terminal Value - Perpetuity Approach

Terminal Value	23,540,491
Present Value of Free Cash Flows	1,058,020
Present Value of Terminal Value	15,941,829

Valuation

Total Enterprise Value	16,999,849
- Interest-Bearing Liabilities	0
+ Cash & Cash Equivalents	1,002,722
Net Debt	1,002,722
Market Equity Value	18,002,571
Shares Outstanding	53,134,937

Equity Value per Share	338.81 \$
Current Share Price	304.60 \$
Upside Potential	11.23%

WACC Calculation (Forecasting Period)

Cost of Equity	8.72%
Risk-free rate	3.01%
Beta	1.13
Market Risk Premium	5.05%
Cost of Debt	0%
% of Debt	0%
% of Equity	100%
WACC	8.72%

Long-term growth rate	6.67%
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WACC Calculation (Terminal Value)

Cost of Equity	8.47%
Risk-free rate	2.91%
Beta	1.4
Market Risk Premium	3.98%
Cost of Debt	2.76%
% of Debt	6%
% of Equity	94%
Tax Rate	23%
WACC	8.11%

Appendix: Valuation VI

CCA

Data	Tier	Ticker	Name	Market cap	Enterprise Value	Revenue	EBITDA	EBIT
		NasdaqGS:SEDG	SolarEdge Technologies Inc.	16997.25	16124.97	2213.46	254.90	213.00
	I	NasdaqGM:ENPH	Enphase Energy, Inc.	27946.79	28188.81	1521.59	259.30	221.60
	I	SZSE:300763	Ginlong Technologies Co., Ltd.	7553	7678.9	599.05	87.00	87.00
	I	SHSE: 688390	Jiangsu Goodwe Power Supply Technology	3917.3	3769.4	454.79	43.10	37.90
	I	SZSE: 300827	Sineng	1401	1360.6	181.50	13.20	11.10
	I	SZSE:300274	Sungrow Power Supply Co., Ltd.	20508.3	19819	3993.70	319.50	271.80

Multiple	Tier	Ticker	Name	EV/Revenue	EV/EBITDA	EV/EBIT
		NasdaqGS:SEDG	SolarEdge Technologies Inc.	7.28	63.26	75.70
	I	NasdaqGM:ENPH	Enphase Energy, Inc.	18.53	108.71	127.21
	I	SZSE:300763	Ginlong Technologies Co., Ltd.	12.82	88.26	88.26
	I	SHSE: 688390	Jiangsu Goodwe Power Supply Technology	8.29	87.46	99.46
	I	SZSE: 300827	Sineng	7.50	103.08	122.58
	I	SZSE:300274	Sungrow Power Supply Co., Ltd.	4.96	62.03	72.92
		Min		1.45x	43.26x	59.26x
		25%-percentile		4.69x	68.39x	76.75x
		Median		8.29x	88.26x	99.46x
		Mean		8.15x	79.44x	92.20x
		75%-percentile		10.55x	99.37x	116.80x
		Max		18.53x	108.71x	127.21x

Enterprise Value	EV/Revenue	EV/EBITDA	EV/EBIT
Min	3,201	11,027	12,622
25%-percentile	10,376	17,432	16,349
Median	18,346	22,498	21,184
Mean	18,050	20,249	19,638
75%-percentile	23,359	25,330	24,878
Max	41,006	27,710	27,095

Share Price	EV/Revenue	EV/EBITDA	EV/EBIT
25%-percentile	195.3	328.1	307.7
Median	345.3	423.4	398.7
Mean	339.7	381.1	369.6
75%-percentile	440.0	476.7	468.2

Implied Share Price	\$	389.12
Current Share Price	\$	304.60
		27.75%

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