

TubeSolar AG

Germany / Renewable Energy
 Düsseldorf, XETRA, m:access
 Bloomberg: 9TS
 ISIN: DE000A2PXQD4

2020 annual report

RATING
BUY

PRICE TARGET
€ 7.70

Return Potential 29.4%
 Risk Rating High

MODULE CERTIFICATION NOW EXPECTED FOR END 2021

TubeSolar has presented its 2020 annual report. As expected, the company, which is developing an innovative agricultural PV technology, did not generate any sales. EBIT amounted to €-2.3m and the net result was €-1.4m. The results were above our estimates, as delays in the module certification process have pushed back the construction and commissioning of the planned 20 MW production line. This has in turn resulted in slower workforce expansion and lower OPEX. We now expect the certification process to be completed by the end of 2021 and the commissioning of the production line in H2/22. We have adjusted our forecasts to reflect the delay. An updated DCF model yields a new price target of €7.70 (previously: €9.40). We confirm our Buy recommendation.

Guidance 2021 & 2022 For 2021, TubeSolar expects an operating loss in the upper single-digit €m range excluding capitalised in-house development services and grants received. For 2022, the company plans on an operating loss in the mid-single-digit €m range excluding capitalised in-house development services and grants received. For the operating cash flow (excluding any grants), TubeSolar is assuming a negative value in the mid-single-digit euro million range for both years.

Following delays in the module certification process, we expect certification by the end of 2021 (previously: Q2/21). This means that the planned commissioning of the 20 MW line is delayed from the end of 2021 to H2/22. The construction of the production line is dependent on the conclusion of appropriate financing. The required capital amounts to approx. €20m and is to be raised through a further capital increase that is already in preparation, through grants from the Free State of Bavaria that have already been applied for, and through taking out bank loans.

(p.t.o.)

FINANCIAL HISTORY & PROJECTIONS

| | 2019 | 2020 | 2021E | 2022E | 2023E | 2024E |
|--------------------|--------|--------|--------|--------|--------|--------|
| Revenue (€m) | 0.00 | 0.00 | 0.00 | 6.40 | 46.80 | 75.60 |
| Y-o-y growth | n.a. | n.a. | n.a. | n.a. | 631.3% | 61.5% |
| EBIT (€m) | -0.25 | -2.32 | -5.22 | 0.03 | 1.04 | 9.56 |
| EBIT margin | n.a. | n.a. | n.a. | 0.5% | 2.2% | 12.6% |
| Net income (€m) | -0.25 | -1.40 | -4.49 | -0.93 | -0.92 | 4.17 |
| EPS (diluted) (€) | -0.03 | -0.14 | -0.37 | -0.07 | -0.06 | 0.27 |
| DPS (€) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| FCF (€m) | -0.25 | -4.33 | -24.80 | -30.97 | -35.87 | -22.13 |
| Net gearing | -37.5% | -36.5% | 37.7% | 46.6% | 134.5% | 170.9% |
| Liquid assets (€m) | 3.95 | 6.13 | 6.28 | 5.30 | 4.44 | 6.30 |

RISKS

The main risks are: technological risk, financing risk, product and production risks, and increasing competition.

COMPANY PROFILE

TubeSolar AG is a manufacturer of solar modules. The patented technology, which integrates solar cells into a glass tube, aims particularly at power generation on sites which are used for agriculture at the same time, and on green roofs. TubeSolar is located in Augsburg, Germany.

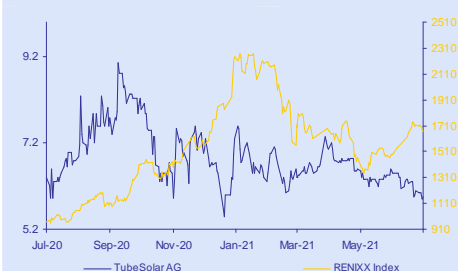
MARKET DATA

As of 09 Jul 2021

| | |
|-------------------------|---------------|
| Closing Price | € 5.95 |
| Shares outstanding | 12.00m |
| Market Capitalisation | € 71.40m |
| 52-week Range | € 5.50 / 9.07 |
| Avg. Volume (12 Months) | 5,491 |

| Multiples | 2020 | 2021E | 2022E |
|------------|------|-------|--------|
| P/E | n.a. | n.a. | n.a. |
| EV/Sales | n.a. | n.a. | 6.0 |
| EV/EBIT | n.a. | n.a. | 1111.6 |
| Div. Yield | 0.0% | 0.0% | 0.0% |

STOCK OVERVIEW



COMPANY DATA

As of 31 Dec 2020

| | |
|----------------------|----------|
| Liquid Assets | € 6.13m |
| Current Assets | € 6.51m |
| Intangible Assets | € 11.04m |
| Total Assets | € 18.79m |
| Current Liabilities | € 1.32m |
| Shareholders' Equity | € 15.49m |

SHAREHOLDERS

| | |
|-------------------------------|-------|
| TSG 1. Vermögensverw. GmbH | 50.2% |
| BD Vermögensverw. GmbH | 10.1% |
| Solar Invest International SE | 8.8% |
| BF Holding GmbH | 4.6% |
| Free Float | 26.3% |



Delay in the module certification process leads to lower staff expansion and lower OPEX

As we predicted, TubeSolar did not generate any sales. Capitalised development costs of €3.5m and other operating income (government grants) of €0.5m were offset by material costs of €1.6m, personnel costs of €1.9m and OPEX of €1.6m. The delay in the module certification process resulted in the hiring of fewer staff and lower OPEX than we expected. Therefore, the operating loss of €-2.3m was slightly above our estimate of €-2.7m. A tax credit of €0.9m led to a net result of €-1.4m (FBe: €-2.9m).

Figure 1: Reported figures versus estimates

| All figures in €m | 2020A | 2020E | Delta | 2019A | Delta |
|-------------------|-------|-------|-------|-------|-------|
| Sales | 0.0 | 0.0 | - | 0.0 | - |
| EBIT | -2.3 | -2.7 | - | -0.3 | - |
| margin | - | - | - | - | - |
| Net income | -1.4 | -2.9 | - | -0.3 | - |
| margin | - | - | - | - | - |
| EPS (diluted) | -0.14 | -0.29 | - | -0.03 | - |

Source: First Berlin Equity Research, TubeSolar AG

Balance sheet strengthened by capital increase

The capital increase carried out in December 2020 (1m shares at €6.00 per share) resulted in gross proceeds of €6m. At the end of 2020, equity amounted to €15.5m (previous year: €10.5m). This corresponds to an equity ratio of 82% (previous year: 95%). While leasing liabilities remained negligible, liabilities to banks increased to €0.5m (previous year: €0). TubeSolar has thus proven its creditworthiness for the first time. Cash and cash equivalents amounted to €6.1m at the end of 2020. This resulted in a net cash position of €5.7m, which was reduced after the balance sheet date by the equivalent of €2.1m through the strategic acquisition of a stake in the American thin-film producer Ascent Solar.

Figure 2: Balance sheet, selected items

| in €m | 2019A | 2020A |
|----------------------------------|-------------|-------------|
| Intangible goods & Goodwill | 0.0 | 11.0 |
| Property, plant & equipment | 0.0 | 1.2 |
| Financial assets | 6.8 | 0.0 |
| Non-current assets, total | 6.8 | 12.3 |
| Inventories | 0.0 | 0.0 |
| Receivables | 0.0 | 0.0 |
| Cash and cash equivalents | 4.0 | 6.1 |
| Current assets, total | 4.2 | 6.5 |
| Equity | 10.5 | 15.5 |
| Equity ratio | 95.7% | 82.4% |
| Financial debt (long-term) | 0.0 | 0.0 |
| Financial debt (short-term) | 0.0 | 0.5 |
| Net debt | -4.0 | -5.7 |
| Net Gearing | -37.5% | -36.5% |
| Payables | 0.1 | 0.7 |
| Balance sheet total | 11.0 | 18.8 |

Source: First Berlin Equity Research, TubeSolar AG

On the assets side, capitalisation of development services led to an increase of €3.7m in intangible assets. Intangible assets increased by a further €8.5m mainly because of the merger of TubeSolar GmbH with the AG. Taking into account depreciation of €1.1m, the value of intangible assets at the end of 2020 was €11.0m. The value of property, plant and equipment was €1.2m at the end of 2020.



No cash flow statement The 2020 annual report does not contain a cash flow statement. The company reports operating cash flow of €-6.3m before capitalised own work and grants. We estimate that operating cash flow including own work capitalised and grants was around €-2.3m. We model cash flow from financing of around €6.5m comprised of the capital increase (€6.0m) and the funds from loans (€0.5m). There was a net cash inflow of €2.2m.

Certification now expected for the end of 2021 The certification of the innovative PV tube modules by TÜV is crucial to the implementation of TubeSolar's business model. In FY 2020, individual tests were not passed by the end of the test sequences. Since then, TubeSolar has improved critical processes and taken corrective measures. The novelty of the modules also poses challenges for the TÜV, which is testing tube modules for the first time, and has led to the adaptation of the test procedures. In the meantime, TubeSolar has expanded its own test options and is now able to carry out or at least simulate all tests in Augsburg. TubeSolar sent the optimised modules to TÜV at the end of June 2021. Based on the current test results and discussions with TÜV, the management is convinced that it will be able to successfully complete the certification.

Commissioning of the 20 MW production line should take place in H2/2022 The delay in the module certification also pushes back the planned commissioning of the 20 MW production line. While we had previously expected production to commence around the end of 2021, we now assume that this will not happen before the second half of 2022.

Capital increase successfully completed in March In March, TubeSolar placed 1m shares at €6.50 per share and raised €6.5m in cash which will be used to build the 20 MW production line. As a result, the number of shares increased from 11m to 12m.

Strategic stake in Ascent Solar In January, TubeSolar acquired a \$2.5m stake in the listed American thin-film producer Ascent Solar Technologies (ASTI) (see our comment of 8 January). ASTI produces thin-film cells and modules based on CIGS technology on a flexible plastic substrate. ASTI's unique monolithic integration process achieves relatively high module efficiency and very good durability. With its stake in Ascent Solar, Tubesolar has established a second thin-film supply source, thereby reducing its previous one-sided dependency on its European supplier. The thin film which is integrated into TubeSolar's glass tubes (see our Initiating coverage from 29 October 2020) is a key input for the TubeSolar modules. Cooperation with the US company could also open the US market for agro-photovoltaics. We expect that TubeSolar will hold a stake of approximately 12% in the company after completion of the well-advanced restructuring of Ascent Solar. Ascent Solar's share price currently stands at \$0.0185, a multiple of TubeSolar's subscription price of \$0.0001 per share. However, we expect a significant increase in the number of shares as part of the ASTI restructuring. Given Ascent Solar's current market capitalisation of approximately \$340m, a stake of 12% would be worth approximately \$41m, equivalent to €34m.

Far-reaching cooperation with green roof system manufacturer ZinCo In April, TubeSolar agreed on a far-reaching, exclusive cooperation with ZinCo GmbH, a leading global company for green roofs. TubeSolar's grid-like modules with their solar and water permeability are not only suitable for agro-PV, but of course also for electricity production on green roofs. The significantly smaller area exposed to wind compared to flat modules allows for a smaller elevation.

In Germany, around 7 million m² of roof space is planted with greenery every year. This results in an annual market potential of approx. 200 MW for the German market alone, without taking existing green roof areas into account. With the cooperation with ZinCo, TubeSolar is harnessing the green roof PV market in addition to the agro-PV market.



Forecasts adjusted for delays The delays in module certification and commissioning of the 20 MW production line have led to an adjustment of our estimates for sales, profits, investments, grants and financing. Previously we assumed output of 32 MW and a turnover of €25.6m for 2022; we now predict an output of 8 MW and a turnover of €6.4m. We also assume lower sales for the following years (see figure 3 for the derivation of the new sales forecasts).

Figure 3: Calculation of sales forecasts 2021E-2026E

| | 2020 | 2021E | 2022E | 2023E | 2024E | 2025E | 2026E |
|---------------|------|-------|-------|--------|--------|---------|---------|
| Sales in MWp | 0 | 0 | 8 | 60 | 108 | 200 | 250 |
| Price (€/MWp) | ./. | ./. | 800 | 780 | 700 | 670 | 650 |
| Sales (€k) | 0 | 0 | 6,400 | 46,800 | 75,600 | 134,000 | 162,500 |

Source: First Berlin Equity Research, TubeSolar AG

We also take into account the impact of the delay on the annual investment budget, the timing of the grants and funding. Our 2021 EBIT estimate will drop from €-1.2m to €-5.2m. The main reason for this is the postponement of investment grants to 2022E. Despite a significantly lower sales estimate for 2022E, our EBIT estimate does not change much, as we are now factoring in capitalised own work of €4.0m and investment grants of €10.4m.

Figure 4: Revisions to forecasts

| All figures in €m | 2021E | | | 2022E | | | 2023E | | |
|-------------------|-------|-------|-------|-------|--------|--------|-------|-------|--------|
| | Old | New | Delta | Old | New | Delta | Old | New | Delta |
| Sales | 0.0 | 0.0 | - | 25.6 | 6.4 | -75.0% | 84.2 | 46.8 | -44.4% |
| EBIT | -1.2 | -5.2 | - | 0.5 | 0.0 | -92.4% | 13.5 | 1.0 | -92.3% |
| margin | - | - | - | 1.8% | 0.5% | - | 16.0% | 2.2% | - |
| Net income | -1.1 | -4.5 | - | -1.0 | -0.9 | - | 9.4 | -0.9 | - |
| margin | - | - | - | -3.8% | -14.6% | - | 11.2% | -2.0% | - |
| EPS (diluted) | -0.09 | -0.37 | - | -0.07 | -0.07 | - | 0.61 | -0.06 | - |

Source: First Berlin Equity Research

Buy reiterated with a lower price target The lower estimates have been incorporated into our updated DCF model. We have taken TubeSolar's stake in Ascent Solar into account at book value (converted approx. €2.1m), as a valuation at market value seems too uncertain due to the low liquidity of the ASTI share and the strong fluctuations in the ASTI share price, especially against the backdrop of the not yet fully completed restructuring of Ascent Solar. Due to the increased free float on account of the capital increases, our WACC estimate declines from 12.9% to 12.5%. Our DCF model for TubeSolar yields a new price target of €7.70 (previously: €9.40). We confirm our Buy recommendation.



VALUATION MODEL

| DCF valuation model | | | | | | | | |
|------------------------------------|----------------|----------------|----------------|----------------|---------------|---------------|---------------|---------------|
| All figures in EUR '000 | | | | | | | | |
| | 2021E | 2022E | 2023E | 2024E | 2025E | 2026E | 2027E | 2028E |
| Net sales | 0 | 6,400 | 46,800 | 75,600 | 134,000 | 162,500 | 184,659 | 207,154 |
| NOPLAT | -5,217 | 35 | 1,041 | 7,770 | 20,191 | 24,458 | 28,203 | 31,729 |
| + depreciation & amortisation | 2,226 | 3,945 | 8,608 | 11,648 | 15,326 | 16,824 | 15,405 | 13,547 |
| Net operating cash flow | -2,991 | 3,980 | 9,649 | 19,418 | 35,517 | 41,281 | 43,608 | 45,276 |
| - total investments (CAPEX and WC) | -22,529 | -33,988 | -43,555 | -37,952 | -14,506 | -13,136 | -13,546 | -14,452 |
| Capital expenditures | -22,190 | -33,064 | -40,234 | -35,378 | -8,710 | -9,484 | -10,139 | -10,659 |
| Working capital | -339 | -924 | -3,321 | -2,574 | -5,796 | -3,652 | -3,407 | -3,793 |
| Free cash flows (FCF) | -25,520 | -30,008 | -33,906 | -18,534 | 21,012 | 28,145 | 30,062 | 30,823 |
| PV of FCF's | -24,123 | -25,212 | -25,319 | -12,298 | 12,391 | 14,753 | 14,005 | 12,759 |

All figures in thousands

| | |
|---|-------------|
| PV of FCFs in explicit period (2021E-2035E) | 26,548 |
| PV of FCFs in terminal period | 53,943 |
| Enterprise value (EV) | 80,492 |
| + Net cash / - net debt (pro forma) | 32,876 |
| + Investments / minority interests | 2,083 |
| Shareholder value | 115,450 |
| Diluted number of shares (discounted) | 15,046 |
| Fair value per share in EUR | 7.67 |

| | |
|----------------------|-------|
| Terminal growth | 2.0% |
| Terminal EBIT margin | 14.9% |

| WACC | | Terminal growth rate | | | | | | | |
|-------------------------|-------|----------------------|-------|-------|-------|-------|-------|-------|-------|
| | | 8.5% | 0.5% | 1.0% | 1.5% | 2.0% | 2.5% | 3.0% | 3.5% |
| Cost of equity | 14.1% | 9.5% | 12.27 | 12.55 | 12.87 | 13.23 | 13.65 | 14.12 | 14.68 |
| Pre-tax cost of debt | 5.0% | 10.5% | 10.13 | 10.46 | 10.68 | 10.92 | 11.19 | 11.49 | 11.84 |
| Tax rate | 30.0% | 11.5% | 8.53 | 8.80 | 8.95 | 9.11 | 9.29 | 9.49 | 9.72 |
| After-tax cost of debt | 3.5% | 12.5% | 7.23 | 7.46 | 7.56 | 7.67 | 7.80 | 7.93 | 8.09 |
| Share of equity capital | 85.0% | 13.5% | 6.15 | 6.35 | 6.43 | 6.51 | 6.59 | 6.69 | 6.79 |
| Share of debt capital | 15.0% | 14.5% | 5.39 | 5.43 | 5.35 | 5.54 | 3.28 | 5.67 | 5.75 |
| Price target | 7.70 | 15.5% | 4.63 | 4.66 | 4.56 | 4.74 | 4.79 | 4.83 | 4.89 |

* for layout purposes the model shows numbers only to 2028, but runs until 2035



INCOME STATEMENT

| All figures in EUR '000 | 2019A | 2020A | 2021E | 2022E | 2023E | 2024E | 2025E |
|--------------------------------|--------------|---------------|---------------|---------------|---------------|---------------|----------------|
| Revenues | 0 | 0 | 0 | 6,400 | 46,800 | 75,600 | 134,000 |
| Own work | 0 | 3,481 | 3,960 | 3,960 | 0 | 0 | 0 |
| Cost of goods sold | 0 | 1,626 | 4,200 | 6,400 | 23,400 | 39,161 | 71,629 |
| Gross profit | 0 | -1,626 | -4,200 | 0 | 23,400 | 36,439 | 62,371 |
| Personnel costs | 297 | 1,921 | 3,904 | 7,500 | 9,820 | 10,698 | 12,082 |
| Other operating income | 177 | 538 | 3,500 | 10,400 | 749 | 756 | 1,340 |
| Other operating expenses | 134 | 1,592 | 2,347 | 2,880 | 4,680 | 5,292 | 9,258 |
| EBITDA | -254 | -1,120 | -2,991 | 3,980 | 9,649 | 21,205 | 42,371 |
| Depreciation and amortisation | 0 | 1,197 | 2,226 | 3,945 | 8,608 | 11,648 | 15,326 |
| Operating income (EBIT) | -254 | -2,317 | -5,217 | 35 | 1,041 | 9,557 | 27,045 |
| Net financial result | 0 | -2 | -400 | -1,200 | -2,125 | -3,600 | -4,200 |
| Non-operating expenses | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Pre-tax income (EBT) | -254 | -2,319 | -5,617 | -1,165 | -1,084 | 5,957 | 22,845 |
| Income taxes | 0 | -917 | -1,123 | -233 | -163 | 1,787 | 6,853 |
| Minority interests | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net income / loss | -254 | -1,402 | -4,494 | -932 | -921 | 4,170 | 15,991 |
| Diluted EPS (in €) | -0.03 | -0.14 | -0.37 | -0.07 | -0.06 | 0.27 | 1.03 |

Ratios

| | | | | | | | |
|---------------------------|------|-------|-------|--------|-------|-------|-------|
| Gross margin | n.m. | n.m. | n.m. | 0.0% | 50.0% | 48.2% | 46.5% |
| EBITDA margin on revenues | n.m. | n.m. | n.m. | 62.2% | 20.6% | 28.0% | 31.6% |
| EBIT margin on revenues | n.m. | n.m. | n.m. | 0.5% | 2.2% | 12.6% | 20.2% |
| Net margin on revenues | n.m. | n.m. | n.m. | -14.6% | -2.0% | 5.5% | 11.9% |
| Tax rate | 0.0% | 39.5% | 20.0% | 20.0% | 15.0% | 30.0% | 30.0% |

Expenses as % of revenues

| | | | | | | | |
|-------------------------------|------|------|------|--------|-------|-------|-------|
| Personnel costs | n.m. | n.m. | n.m. | 117.2% | 21.0% | 14.2% | 9.0% |
| Depreciation and amortisation | n.m. | n.m. | n.m. | 61.6% | 18.4% | 15.4% | 11.4% |
| Other operating expenses | n.m. | n.m. | n.m. | 45.0% | 10.0% | 7.0% | 6.9% |

Y-Y Growth

| | | | | | | | |
|------------------|------|------|------|------|---------|--------|--------|
| Revenues | n.m. | n.m. | n.m. | n.m. | 631.3% | 61.5% | 77.2% |
| Operating income | n.m. | n.m. | n.m. | n.m. | 2905.6% | 817.8% | 183.0% |
| Net income/ loss | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | 283.5% |



BALANCE SHEET

| All figures in EUR '000 | 2019A | 2020A | 2021E | 2022E | 2023E | 2024E | 2025E |
|---|---------------|---------------|---------------|---------------|----------------|----------------|----------------|
| Assets | | | | | | | |
| Current assets, total | 4,174 | 6,509 | 6,655 | 6,730 | 10,580 | 16,315 | 41,591 |
| Cash and cash equivalents | 3,950 | 6,133 | 6,278 | 5,303 | 4,435 | 6,301 | 23,113 |
| Short-term investments | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Receivables | 0 | 0 | 1 | 526 | 3,847 | 6,421 | 11,681 |
| Inventories | 0 | 1 | 1 | 526 | 1,923 | 3,219 | 6,423 |
| Other current assets | 224 | 375 | 375 | 375 | 375 | 375 | 375 |
| Non-current assets, total | 6,845 | 12,280 | 34,912 | 64,031 | 95,657 | 119,387 | 112,771 |
| Property, plant & equipment | 0 | 1,237 | 23,365 | 54,029 | 87,005 | 111,999 | 106,039 |
| Goodwill & other intangibles | 0 | 11,043 | 9,464 | 7,919 | 6,569 | 5,305 | 4,649 |
| Other assets | 6,845 | 0 | 2,083 | 2,083 | 2,083 | 2,083 | 2,083 |
| Total assets | 11,019 | 18,788 | 41,567 | 70,761 | 106,237 | 135,702 | 154,362 |
| Shareholders' equity & debt | | | | | | | |
| Current liabilities, total | 384 | 1,317 | 504 | 630 | 2,027 | 3,322 | 20,991 |
| Short-term debt | 0 | 476 | 0 | 0 | 0 | 0 | 15,000 |
| Accounts payable | 65 | 738 | 400 | 526 | 1,923 | 3,219 | 5,887 |
| Current provisions | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other current liabilities | 319 | 104 | 104 | 104 | 104 | 104 | 104 |
| Long-term liabilities, total | 94 | 1,986 | 17,902 | 27,902 | 62,902 | 86,902 | 71,902 |
| Long-term debt | 0 | 0 | 15,000 | 25,000 | 60,000 | 84,000 | 69,000 |
| Deferred revenue | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other liabilities | 94 | 1,986 | 2,902 | 2,902 | 2,902 | 2,902 | 2,902 |
| Minority interests | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Shareholders' equity | 10,541 | 15,486 | 23,161 | 42,229 | 41,308 | 45,478 | 61,469 |
| Share capital | 10,000 | 11,000 | 13,000 | 15,500 | 15,500 | 15,500 | 15,500 |
| Capital reserve | 795 | 6,142 | 16,642 | 34,142 | 34,142 | 34,142 | 34,142 |
| Other reserves | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Treasury stock | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Loss carryforward / retained earnings | -254 | -1,656 | -6,150 | -7,082 | -8,003 | -3,833 | 12,158 |
| Total consolidated equity and debt | 11,019 | 18,788 | 41,567 | 70,761 | 106,237 | 135,702 | 154,362 |
| Ratios | | | | | | | |
| Current ratio (x) | 10.86 | 4.94 | 13.21 | 10.69 | 5.22 | 4.91 | 1.98 |
| Quick ratio (x) | 10.86 | 4.94 | 13.21 | 9.85 | 4.27 | 3.94 | 1.68 |
| Net debt | -3,950 | -5,658 | 8,722 | 19,697 | 55,565 | 77,699 | 60,887 |
| Net gearing | -37.5% | -36.5% | 37.7% | 46.6% | 134.5% | 170.9% | 99.1% |
| Equity ratio | 95.7% | 82.4% | 55.7% | 59.7% | 38.9% | 33.5% | 39.8% |
| Book value per share (in €) | 1.05 | 1.55 | 1.93 | 3.02 | 2.67 | 2.93 | 3.97 |
| Return on equity (ROE) | -2.4% | -9.1% | -19.4% | -2.2% | -2.2% | 9.2% | 26.0% |
| Days of sales outstanding (DSO) | 0.0 | 0.0 | 0.0 | 30.0 | 30.0 | 31.0 | 31.8 |
| Days inventory outstanding | 0.0 | 0.2 | 0.1 | 30.0 | 30.0 | 30.0 | 32.7 |
| Days in payables (DIP) | 0.0 | 165.6 | 34.8 | 30.0 | 30.0 | 30.0 | 30.0 |



CASH FLOW STATEMENT

| All figures in EUR '000 | 2019A | 2020A | 2021E | 2022E | 2023E | 2024E | 2025E |
|-------------------------------|--------------|---------------|----------------|----------------|----------------|----------------|---------------|
| EBIT | -254 | -2,317 | -5,217 | 35 | 1,041 | 9,557 | 27,045 |
| Depreciation and amortisation | 0 | 1,197 | 2,226 | 3,945 | 8,608 | 11,648 | 15,326 |
| EBITDA | -254 | -1,120 | -2,991 | 3,980 | 9,649 | 21,205 | 42,371 |
| Changes in working capital | 0 | 306 | -339 | -924 | -3,321 | -2,574 | -5,796 |
| Other adjustments | 0 | -1,504 | 723 | -967 | -1,962 | -5,387 | -11,053 |
| Operating cash flow | -254 | -2,318 | -2,606 | 2,089 | 4,366 | 13,244 | 25,522 |
| Investments in PP&E | 0 | -1,299 | -22,190 | -33,000 | -40,000 | -35,000 | -8,040 |
| Investments in intangibles | 0 | -715 | 0 | -64 | -234 | -378 | -670 |
| Free cash flow | -254 | -4,332 | -24,796 | -30,975 | -35,868 | -22,134 | 16,812 |
| Acquisitions & disposals, net | 0 | 40 | -2,083 | 0 | 0 | 0 | 0 |
| Other investments | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Investment cash flow | 0 | -1,974 | -24,273 | -33,064 | -40,234 | -35,378 | -8,710 |
| Debt financing, net | 0 | 476 | 14,525 | 10,000 | 35,000 | 24,000 | 0 |
| Equity financing, net | 0 | 6,000 | 12,500 | 20,000 | 0 | 0 | 0 |
| Dividends paid | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Other financing | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Financing cash flow | 0 | 6,476 | 27,025 | 30,000 | 35,000 | 24,000 | 0 |
| FOREX & other effects | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Net cash flows | -254 | 2,184 | 145 | -975 | -868 | 1,866 | 16,812 |
| Cash, start of the year | 0 | 3,950 | 6,133 | 6,278 | 5,303 | 4,435 | 6,301 |
| Cash, end of the year | -254 | 6,134 | 6,278 | 5,303 | 4,435 | 6,301 | 23,113 |
| EBITDA/share (in €) | -0.03 | -0.11 | -0.25 | 0.28 | 0.62 | 1.37 | 2.73 |
| Y-Y Growth | | | | | | | |
| Operating cash flow | n.m. | n.m. | n.m. | n.m. | 109.0% | 203.4% | 92.7% |
| Free cash flow | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. | n.m. |
| EBITDA/share | n.m. | n.m. | n.m. | n.m. | 119.0% | 119.8% | 99.8% |

Imprint / Disclaimer

First Berlin Equity Research

First Berlin Equity Research GmbH ist ein von der BaFin betreffend die Einhaltung der Pflichten des §85 Abs. 1 S. 1 WpHG, des Art. 20 Abs. 1 Marktmissbrauchsverordnung (MAR) und der Markets Financial Instruments Directive (MiFID) II, Markets in Financial Instruments Directive (MiFID) II Durchführungsverordnung und der Markets in Financial Instruments Regulations (MiFIR) beaufsichtigtes Unternehmen.

First Berlin Equity Research GmbH is one of the companies monitored by BaFin with regard to its compliance with the requirements of Section 85 (1) sentence 1 of the German Securities Trading Act [WpHG], art. 20 (1) Market Abuse Regulation (MAR) and Markets in Financial Instruments Directive (MiFID) II, Markets in Financial Instruments Directive (MiFID) II Commission Delegated Regulation and Markets in Financial Instruments Regulations (MiFIR).

Anschrift:

First Berlin Equity Research GmbH
Mohrenstr. 34
10117 Berlin
Germany

Vertreten durch den Geschäftsführer: Martin Bailey

Telefon: +49 (0) 30-80 93 9 680

Fax: +49 (0) 30-80 93 9 687

E-Mail: info@firstberlin.com

Amtsgericht Berlin Charlottenburg HR B 103329 B

UST-Id.: 251601797

Ggf. Inhaltlich Verantwortlicher gem. § 6 MDStV

First Berlin Equity Research GmbH

Authored by: Dr. Karsten von Blumenthal, Analyst

All publications of the last 12 months were authored by Dr. Karsten von Blumenthal.

Company responsible for preparation: First Berlin Equity Research GmbH, Mohrenstraße 34, 10117 Berlin

The production of this recommendation was completed on 12 July 2021 at 15:18

Person responsible for forwarding or distributing this financial analysis: Martin Bailey

Copyright© 2021 First Berlin Equity Research GmbH No part of this financial analysis may be copied, photocopied, duplicated or distributed in any form or media whatsoever without prior written permission from First Berlin Equity Research GmbH. First Berlin Equity Research GmbH shall be identified as the source in the case of quotations. Further information is available on request.

INFORMATION PURSUANT TO SECTION 85 (1) SENTENCE 1 OF THE GERMAN SECURITIES TRADING ACT [WPHG], TO ART. 20 (1) OF REGULATION (EU) NO 596/2014 OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF APRIL 16, 2014, ON MARKET ABUSE (MARKET ABUSE REGULATION) AND TO ART. 37 OF COMMISSION DELEGATED REGULATION (EU) NO 2017/565 (MIFID) II.

First Berlin Equity Research GmbH (hereinafter referred to as: "First Berlin") prepares financial analyses while taking the relevant regulatory provisions, in particular section 85 (1) sentence 1 of the German Securities Trading Act [WpHG], art. 20 (1) of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014, on market abuse (market abuse regulation) and art. 37 of Commission Delegated Regulation (EU) no. 2017/565 (MiFID II) into consideration. In the following First Berlin provides investors with information about the statutory provisions that are to be observed in the preparation of financial analyses.

CONFLICTS OF INTEREST

In accordance with art. 37 (1) of Commission Delegated Regulation (EU) no. 2017/565 (MiFID) II and art. 20 (1) of Regulation (EU) No 596/2014 of the European Parliament and of the Council of April 16, 2014, on market abuse (market abuse regulation) investment firms which produce, or arrange for the production of, investment research that is intended or likely to be subsequently disseminated to clients of the firm or to the public, under their own responsibility or that of a member of their group, shall ensure the implementation of all the measures set forth in accordance with Article 34 (2) lit. (b) of Regulation (EU) 2017/565 in relation to the financial analysts involved in the production of the investment research and other relevant persons whose responsibilities or business interests may conflict with the interests of the persons to whom the investment research is disseminated. In accordance with art. 34 (3) of Regulation (EU) 2017/565 the procedures and measures referred to in paragraph 2 lit. (b) of such article shall be designed to ensure that relevant persons engaged in different business activities involving a conflict of interests carry on those activities at a level of independence appropriate to the size and activities of the investment firm and of the group to which it belongs, and to the risk of damage to the interests of clients.

In addition, First Berlin shall pursuant to Article 5 of the Commission Delegated Regulation (EU) 2016/958 disclose in their recommendations all relationships and circumstances that may reasonably be expected to impair the objectivity of the financial analyses, including interests or conflicts of interest, on their part or on the part of any natural or legal person working for them under a contract, including a contract of employment, or otherwise, who was involved in producing financial analyses, concerning any financial instrument or the issuer to which the recommendation directly or indirectly relates.

With regard to the financial analyses of TubeSolar AG the following relationships and circumstances exist which may reasonably be expected to impair the objectivity of the financial analyses: The author, First Berlin, or a company associated with First Berlin reached an agreement with the TubeSolar AG for preparation of a financial analysis for which remuneration is owed.

Furthermore, First Berlin offers a range of services that go beyond the preparation of financial analyses. Although First Berlin strives to avoid conflicts of interest wherever possible, First Berlin may maintain the following relations with the analysed company, which in particular may constitute a potential conflict of interest:

- The author, First Berlin, or a company associated with First Berlin owns a net long or short position exceeding the threshold of 0,5 % of the total issued share capital of the analysed company;
- The author, First Berlin, or a company associated with First Berlin holds an interest of more than five percent in the share capital of the analysed company;

- The author, First Berlin, or a company associated with First Berlin provided investment banking or consulting services for the analysed company within the past twelve months for which remuneration was or was to be paid;
- The author, First Berlin, or a company associated with First Berlin reached an agreement with the analysed company for preparation of a financial analysis for which remuneration is owed;
- The author, First Berlin, or a company associated with First Berlin has other significant financial interests in the analysed company;

With regard to the financial analyses of TubeSolar AG the following of the aforementioned potential conflicts of interests or the potential conflicts of interest mentioned in Article 6 paragraph 1 of the Commission Delegated Regulation (EU) 2016/958 exist: The author, First Berlin, or a company associated with First Berlin reached an agreement with the TubeSolar AG for preparation of a financial analysis for which remuneration is owed.

In order to avoid and, if necessary, manage possible conflicts of interest both the author of the financial analysis and First Berlin shall be obliged to neither hold nor in any way trade the securities of the company analyzed. The remuneration of the author of the financial analysis stands in no direct or indirect connection with the recommendations or opinions represented in the financial analysis. Furthermore, the remuneration of the author of the financial analysis is neither coupled directly to financial transactions nor to stock exchange trading volume or asset management fees.

INFORMATION PURSUANT TO SECTION 64 OF THE GERMAN SECURITIES TRADING ACT [WPHG], DIRECTIVE 2014/65/EU OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL OF 15 MAY 2014 ON MARKETS IN FINANCIAL INSTRUMENTS AND AMENDING DIRECTIVE 2002/92/EC AND DIRECTIVE 2011/61/EU, ACCOMPANIED BY THE MARKETS IN FINANCIAL INSTRUMENTS REGULATION (MIFIR, REG. EU NO. 600/2014).

First Berlin notes that it has concluded a contract with the issuer to prepare financial analyses and is paid for that by the issuer. First Berlin makes the financial analysis simultaneously available for all interested security financial services companies. First Berlin thus believes that it fulfils the requirements of section 64 WpHG for minor non-monetary benefits.

PRICE TARGET DATES

Unless otherwise indicated, current prices refer to the closing prices of the previous trading day.

AGREEMENT WITH THE ANALYSED COMPANY AND MAINTENANCE OF OBJECTIVITY

The present financial analysis is based on the author's own knowledge and research. The author prepared this study without any direct or indirect influence exerted on the part of the analysed company. Parts of the financial analysis were possibly provided to the analysed company prior to publication in order to avoid inaccuracies in the representation of facts. However, no substantial changes were made at the request of the analysed company following any such provision.

ASSET VALUATION SYSTEM

First Berlin's system for asset valuation is divided into an asset recommendation and a risk assessment.

ASSET RECOMMENDATION

The recommendations determined in accordance with the share price trend anticipated by First Berlin in the respectively indicated investment period are as follows:

| Category | | 1 | 2 |
|--------------------------------------|--|---------------|-------------|
| Current market capitalisation (in €) | | 0 - 2 billion | > 2 billion |
| Strong Buy ¹ | An expected favourable price trend of: | > 50% | > 30% |
| Buy | An expected favourable price trend of: | > 25% | > 15% |
| Add | An expected favourable price trend of: | 0% to 25% | 0% to 15% |
| Reduce | An expected negative price trend of: | 0% to -15% | 0% to -10% |
| Sell | An expected negative price trend of: | < -15% | < -10% |

¹ The expected price trend is in combination with sizable confidence in the quality and forecast security of management.

Our recommendation system places each company into one of two market capitalisation categories. Category 1 companies have a market capitalisation of €0 – €2 billion, and Category 2 companies have a market capitalisation of > €2 billion. The expected return thresholds underlying our recommendation system are lower for Category 2 companies than for Category 1 companies. This reflects the generally lower level of risk associated with higher market capitalisation companies.

RISK ASSESSMENT

The First Berlin categories for risk assessment are low, average, high and speculative. They are determined by ten factors: Corporate governance, quality of earnings, management strength, balance sheet and financial risk, competitive position, standard of financial disclosure, regulatory and political uncertainty, strength of brandname, market capitalisation and free float. These risk factors are incorporated into the First Berlin valuation models and are thus included in the target prices. First Berlin customers may request the models.

RECOMMENDATION & PRICE TARGET HISTORY

| Report No.: | Date of publication | Previous day closing price | Recommendation | Price target |
|----------------|---------------------|----------------------------|----------------|--------------|
| Initial Report | 29 October 2020 | €6.60 | Buy | €9.40 |
| 2...1 | ↓ | ↓ | ↓ | ↓ |
| 2 | 4 December 2020 | €7.15 | Buy | €9.40 |
| 3 | 8 January 2021 | €6.95 | Buy | €9.40 |
| 4 | 1 April 2021 | €6.65 | Buy | €9.40 |
| 5 | Today | €5.95 | Buy | €7.70 |

INVESTMENT HORIZON

Unless otherwise stated in the financial analysis, the ratings refer to an investment period of twelve months.

UPDATES

At the time of publication of this financial analysis it is not certain whether, when and on what occasion an update will be provided. In general First Berlin strives to review the financial analysis for its topicality and, if required, to update it in a timely manner in connection with the reporting obligations of the analysed company or on the occasion of ad hoc notifications.

SUBJECT TO CHANGE

The opinions contained in the financial analysis reflect the assessment of the author on the day of publication of the financial analysis. The author of the financial analysis reserves the right to change such opinion without prior notification.

Legally required information regarding

- key sources of information in the preparation of this research report
- valuation methods and principles
- sensitivity of valuation parameters

can be accessed through the following internet link: <https://firstberlin.com/disclaimer-english-link/>

SUPERVISORY AUTHORITY: Bundesanstalt für Finanzdienstleistungsaufsicht (German Federal Financial Supervisory Authority) [BaFin], Graurheindorferstraße 108, 53117 Bonn and Marie-Curie-Straße 24-28, 60439 Frankfurt am Main

EXCLUSION OF LIABILITY (DISCLAIMER)

RELIABILITY OF INFORMATION AND SOURCES OF INFORMATION

The information contained in this study is based on sources considered by the author to be reliable. Comprehensive verification of the accuracy and completeness of information and the reliability of sources of information has neither been carried out by the author nor by First Berlin. As a result no warranty of any kind whatsoever shall be assumed for the accuracy and completeness of information and the reliability of sources of information, and neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be liable for any direct or indirect damage incurred through reliance on the accuracy and completeness of information and the reliability of sources of information.

RELIABILITY OF ESTIMATES AND FORECASTS

The author of the financial analysis made estimates and forecasts to the best of the author's knowledge. These estimates and forecasts reflect the author's personal opinion and judgement. The premises for estimates and forecasts as well as the author's perspective on such premises are subject to constant change. Expectations with regard to the future performance of a financial instrument are the result of a measurement at a single point in time and may change at any time. The result of a financial analysis always describes only one possible future development – the one that is most probable from the perspective of the author – of a number of possible future developments.

Any and all market values or target prices indicated for the company analysed in this financial analysis may not be achieved due to various risk factors, including but not limited to market volatility, sector volatility, the actions of the analysed company, economic climate, failure to achieve earnings and/or sales forecasts, unavailability of complete and precise information and/or a subsequently occurring event which affects the underlying assumptions of the author and/or other sources on which the author relies in this document. Past performance is not an indicator of future results; past values cannot be carried over into the future.

Consequently, no warranty of any kind whatsoever shall be assumed for the accuracy of estimates and forecasts, and neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be liable for any direct or indirect damage incurred through reliance on the correctness of estimates and forecasts.

INFORMATION PURPOSES, NO RECOMMENDATION, SOLICITATION, NO OFFER FOR THE PURCHASE OF SECURITIES

The present financial analysis serves information purposes. It is intended to support institutional investors in making their own investment decisions; however in no way provide the investor with investment advice. Neither the author, nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall be considered to be acting as an investment advisor or portfolio manager vis-à-vis an investor. Each investor must form his own independent opinion with regard to the suitability of an investment in view of his own investment objectives, experience, tax situation, financial position and other circumstances.

The financial analysis does not represent a recommendation or solicitation and is not an offer for the purchase of the security specified in this financial analysis. Consequently, neither the author nor First Berlin, nor the person responsible for passing on or distributing the financial analysis shall as a result be liable for losses incurred through direct or indirect employment or use of any kind whatsoever of information or statements arising out of this financial analysis.

A decision concerning an investment in securities should take place on the basis of independent investment analyses and procedures as well as other studies including, but not limited to, information memoranda, sales or issuing prospectuses and not on the basis of this document.

NO ESTABLISHMENT OF CONTRACTUAL OBLIGATIONS

By taking note of this financial analysis the recipient neither becomes a customer of First Berlin, nor does First Berlin incur any contractual, quasi-contractual or pre-contractual obligations and/or responsibilities toward the recipient. In particular no information contract shall be established between First Berlin and the recipient of this information.

NO OBLIGATION TO UPDATE

First Berlin, the author and/or the person responsible for passing on or distributing the financial analysis shall not be obliged to update the financial analysis. Investors must keep themselves informed about the current course of business and any changes in the current course of business of the analysed company.

DUPLICATION

Dispatch or duplication of this document is not permitted without the prior written consent of First Berlin.

SEVERABILITY

Should any provision of this disclaimer prove to be illegal, invalid or unenforceable under the respectively applicable law, then such provision shall be treated as if it were not an integral component of this disclaimer; in no way shall it affect the legality, validity or enforceability of the remaining provisions.

APPLICABLE LAW, PLACE OF JURISDICTION

The preparation of this financial analysis shall be subject to the law obtaining in the Federal Republic of Germany. The place of jurisdiction for any disputes shall be Berlin (Germany).

NOTICE OF DISCLAIMER

By taking note of this financial analysis the recipient confirms the binding nature of the above explanations.

By using this document or relying on it in any manner whatsoever the recipient accepts the above restrictions as binding for the recipient.

QUALIFIED INSTITUTIONAL INVESTORS

First Berlin financial analyses are intended exclusively for qualified institutional investors.

This report is not intended for distribution in the USA and/or Canada.