

# Photon Energy NV

Netherlands | Utilities | MCap EUR 123.4m

15 November 2023

UPDATE



## Q3: markets remain challenging, guidance / est. / PT down, BUY

### What's it all about?

Photon Energy reported Q3 numbers. The quarter saw a significant decline in revenues, mainly due to a drop in power generation and trading revenues. Despite significantly increased production capacity, power generation revenues fell by 53% due to a sharp drop in prices. Trading revenues saw an almost 80% decline due to excess supply, intense competition, and lower volumes. The gross margin recovered to 61.6% due to an improving mix, but the company reported an EBIT loss related to higher expenses from the Lerta acquisition. Improved working capital management in Q3 released cash, but free cash flow still was negative due to continued capex for the Romanian capacity build-up. Photon Energy is seeking a EUR 15m loan from EBRD to support further projects in Romania. FY23 revenue guidance was further downgraded to EUR 75-80m. The EBITDA guidance of EUR 10m is attainable if sales negotiations for Polish PV projects conclude in Q4 2023. We adjust estimates, resulting in a new price target of EUR 3.20, still supporting a BUY rating.

**BUY** (BUY)

<b>Target price</b>	<b>EUR 3.20 (3.80)</b>
Current price	EUR 2.02
Up/downside	58.8%



**MAIN AUTHOR**

**Dr. Oliver Wojahn, CFA**

[o.wojahn@alsterresearch.com](mailto:o.wojahn@alsterresearch.com)

+49 40 309 293-55

IMPORTANT. Please refer to the last page of this report for "Important disclosures" and analyst(s) certifications.

[alsterresearch.com](https://alsterresearch.com)

This research is the product of AlsterResearch, which is registered with the BaFin in Germany.

# Photon Energy NV

Netherlands | Utilities | MCap EUR 123.4m | EV EUR 250.7m

**BUY** (BUY)

**Target price** EUR 3.20 (3.80)  
**Current price** EUR 2.02  
**Up/downside** 58.8%

**MAIN AUTHOR**

**Dr. Oliver Wojahn, CFA**  
o.wojahn@alsterresearch.com  
+49 40 309 293-55

## Q3: markets remain challenging, guidance/est./PT down, BUY

**Declining revenues in Q3.** Photon Energy announced its Q3 results and held a conference call. Revenues of EUR 19.2m were down almost 46% yoy. One major factor was the decline in power generation revenues (-53% yoy), where an increase in production of c. 33% was more than offset by falling prices (-61%). The second factor was an almost 80% (!) yoy decline in trading revenues due to excess supply, fierce competition and declining volumes. The additional revenues from New Energy (including the Lerta acquisition) and the good development of Engineering could not compensate these shortfalls.

**Gross margin recovering, but operating losses.** A bright spot was the Q3 gross margin of 61,6%, up more than 4PP both qoq and yoy. The main driver was a mix effect with a declining share of the lower margin trading business. The EBITDA margin, however, continues to suffer from an increase in personnel and other expenses, mainly related to the acquisition of Lerta. As a result, Photon Energy slipped back into losses at the EBIT level.

**Working capital management is improving.** Operating cash flow before working capital changes was approximately EUR 1.7m in Q3. Tighter working capital management released an additional c. EUR 3.8m of cash, resulting in an overall CFO of EUR 5.5m. The continued build-up of the Romanian PV plants resulted in a CFI of EUR 9.2m and a Q3 free cash flow of EUR -3.7m. In view of the still challenging market conditions, Photon Energy's further capacity expansion is dependent on the ability to secure financing on terms that allow for the profitable operation of PV power plants. In this context, the company is negotiating a EUR 15m senior loan from the European Bank for Reconstruction and Development (EBRD) to ensure the timely completion of the power plants under construction (c. 20 MWp) and the start of construction work on the ready-to-build projects in Romania.

- continued next page -

Photon Energy NV	2020	2021	2022	2023E	2024E	2025E
Sales	28.3	36.4	94.2	78.7	107.9	124.1
<i>Growth yoy</i>	-6.3%	28.7%	159.1%	-16.4%	37.1%	15.0%
EBITDA	8.4	9.6	24.1	6.5	15.8	22.7
EBIT	-0.1	-0.9	14.5	-3.5	5.2	10.6
Net profit	2.1	2.0	4.3	0.0	-0.4	8.5
Net debt (net cash)	84.5	89.1	127.3	131.1	145.3	177.2
Net debt/EBITDA	10.0x	9.3x	5.3x	20.3x	9.2x	7.8x
EPS reported	0.04	0.04	0.07	0.00	-0.01	0.14
DPS	0.00	0.00	0.00	0.00	0.00	0.00
<i>Dividend yield</i>	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross profit margin	83.6%	65.0%	53.1%	60.2%	69.8%	72.6%
EBITDA margin	29.9%	26.4%	25.5%	8.2%	14.6%	18.3%
EBIT margin	-0.5%	-2.3%	15.4%	-4.5%	4.8%	8.5%
ROCE	-0.1%	-0.4%	6.6%	-1.6%	2.0%	3.3%
EV/Sales	7.4x	5.8x	2.7x	3.2x	2.5x	2.4x
EV/EBITDA	24.6x	22.2x	10.4x	39.4x	17.0x	13.2x
EV/EBIT	-1,464.3x	-249.4x	17.2x	-72.5x	51.4x	28.4x
PER	49.5x	56.0x	28.8x	5,847.1x	-303.4x	14.5x

Source: Company data, AlsterResearch



Source: Company data, AlsterResearch

**High/low 52 weeks** 2.95 / 2.01  
**Price/Book Ratio** 2.0x

### Ticker / Symbols

ISIN NL0010391108  
WKN A1T9KW  
Bloomberg P7V:GR

### Changes in estimates

		Sales	EBIT	EPS
2023E	old	110.5	-0.3	0.09
	Δ	-28.7%	na%	-99.6%
2024E	old	137.9	9.4	0.13
	Δ	-21.8%	-44.1%	na%
2025E	old	160.5	17.9	0.40
	Δ	-22.7%	-40.8%	-65.6%

### Key share data

Number of shares: (in m pcs) 61.24  
Book value per share: (in EUR) 0.99  
Ø trading volume: (12 months) 136

### Major shareholders

Solar Future 35.5%  
Solar Power to the People 32.8%  
Treasury Shares 2.4%  
Free Float 29.3%

### Company description

Photon Energy NV is a solar energy and water treatment solutions company based in the Netherlands that covers the entire lifecycle of its technologies. The Company develops projects in Australia, Hungary, Poland and Romania, and provides operations and maintenance services worldwide. The Company has offices in Europe and Australia.

**Guidance downgrade.** With release of the Q2 figures, Photon Energy had reduced the FY23 revenue guidance from EUR 150m to EUR 110m. Following declining volumes in the PV component trading, management now expects revenues in a range of EUR 75-80m. Management also confirmed that the revised EBITDA guidance of EUR 10m is still achievable, but only if sales negotiations for Photon Energy's Polish PV projects will be concluded in Q4 2023.

**Downgrade est./PT, still a BUY.** We adjust estimates to reflect a slower buildup of own PV capacity due to potential financing constraints and a shift of strategy now emphasizing electricity services over own production. We also lower volume and profitability assumptions for the trading unit. With adjusted estimates, we come to a new price target of EUR 3.20 (old: EUR 3.80), which still supports a **BUY rating**.

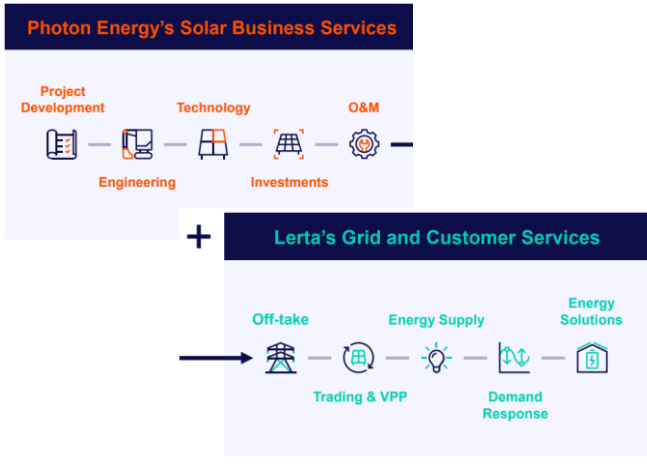
The following table displays the quarterly performance of **Photon Energy NV**:

P&L data	Q4 2021	Q1 2022	Q2 2022	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023
Sales	11.7	9.1	23.2	35.4	26.4	19.3	21.0	19.2
yoy growth in %	130.3%	99.9%	135.7%	247.2%	125.3%	111.0%	-9.8%	-45.7%
Gross profit	4.4	6.2	14.3	20.3	9.3	6.2	11.9	11.8
Gross margin in %	37.3%	67.5%	61.4%	57.4%	35.3%	32.4%	56.9%	61.6%
EBITDA	0.9	2.0	8.1	12.7	1.2	0.3	2.5	1.9
EBITDA margin in %	8.0%	22.2%	35.0%	35.9%	4.6%	1.7%	11.9%	10.0%
EBIT	-1.0	0.5	4.6	9.7	-0.4	-1.6	0.1	-1.0
EBIT margin in %	-8.9%	5.8%	20.0%	27.5%	-1.3%	-8.1%	0.5%	-5.4%
EBT	-1.2	-1.3	2.6	7.3	-2.4	-4.2	-2.8	-4.0
taxes paid	-0.2	-0.1	0.6	1.3	-1.4	0.0	0.5	-1.8
tax rate in %	20.0%	10.5%	22.5%	18.1%	58.4%	0.0%	-17.0%	46.0%
net profit	-1.0	-1.4	2.0	6.0	-3.8	-4.2	-3.3	-2.1
yoy growth in %	na%	na%	na%	na%	na%	na%	na%	na%
<b>EPS</b>	<b>-0.02</b>	<b>-0.03</b>	<b>0.04</b>	<b>0.11</b>	<b>-0.07</b>	<b>-0.08</b>	<b>-0.06</b>	<b>-0.04</b>

Source: Company data; AlsterResearch

# Investment case in six charts

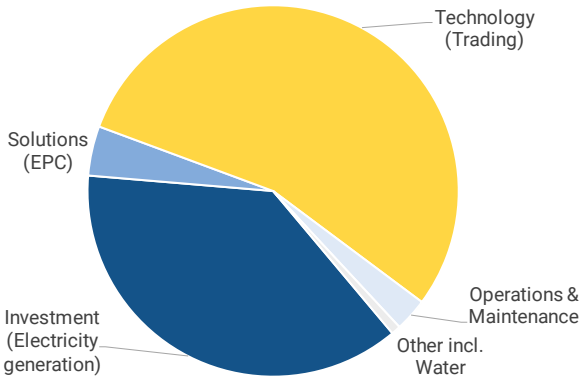
## Business Model



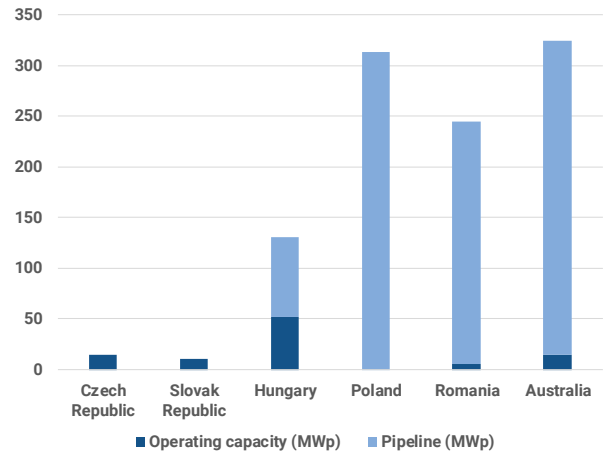
## Geographical Presence



## External Revenue Shares (2022)

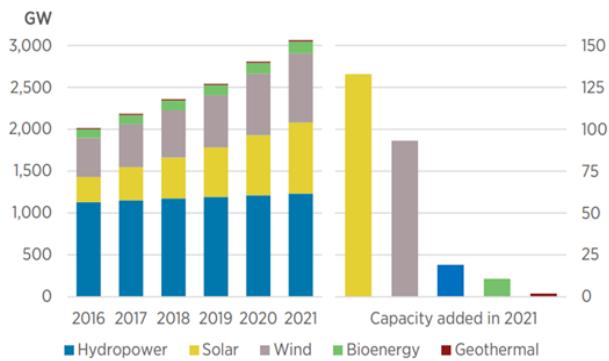


## Capacity and pipeline

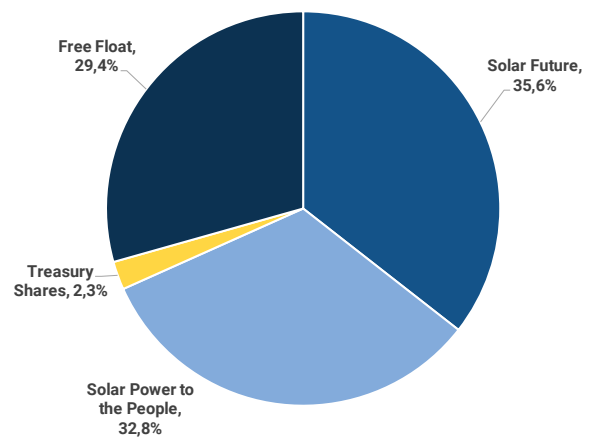


## Fastest growing renewable energy

Renewable power capacity growth



## Major shareholders



Source: Company data; AlsterResearch; IRENA

# SWOT analysis

## Strengths

- early mover in the PV market with expertise in the whole system life cycle
- unique focus on and understanding of CEE market
- visible growth trajectory with a growing share of recurring revenue
- strong ESG credentials translating into lower cost of capital (-> green bond)
- transparent and detailed reporting and comprehensive capital market communications
- strong management team and high standards of corporate governance

## Weaknesses

- still a relatively small player
- high leverage and capital needs to fulfill project pipeline
- strong seasonality in solar business (mitigated by Australian projects)
- analysis of underlying profitability complex due the nature of the business (FX and derivatives effects, strong contribution of OCI, capital gains on resale of projects and high share of internal revenues in business segments)

## Opportunities

- fragmented competition in the 1 MWp – 20 MWp PV sweet spot
- solar power finally competitive without subsidies
- access to promising technology (RayGen) via equity participation
- catch up potential in CEE and a well filled project pipeline
- increasing electricity prices combined with a shift to selling electricity at market prices
- high prices for fossil energy and geopolitical tailwinds
- increasing interest in behind-the-meter projects
- increasing share of renewables leads to greater demand for grid flexibility and VPP services
- PFAS water remediation potentially huge market

## Threats

- water business line could distract focus
- volatile market prices and supply bottlenecks for solar panels
- large-scale project risk (cost overruns, change in market conditions during development etc.)
- regulatory risks, for example retroactive adjustments to feed-in tariffs or price caps

# Valuation

## DCF Model

The DCF model results in a **fair value of EUR 3.21 per share**:

**Top-line growth:** We expect Photon Energy NV to grow revenues at a CAGR of 14.2% between 2023E and 2030E. The long-term growth rate is set at 2.0%.

**ROCE.** Returns on capital are developing from -1.6% in 2023E to 7.7% in 2030E.

**WACC.** Starting point is a historical equity beta of 1.00. Unlevering and correcting for mean reversion yields an asset beta of 0.71. Combined with a risk-free rate of 2.0% and an equity risk premium of 6.0% this yields cost of equity of 10.4%. With pre-tax cost of borrowing at 7.5%, a tax rate of 35.0% and target debt/equity of 1.5 this results in a long-term WACC of 7.1%.

DCF (EURm) (except per share data and beta)	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E	Terminal value
NOPAT	-2.5	3.7	7.4	11.6	14.7	17.8	20.9	25.4	
Depreciation & amortization	10.0	10.5	12.1	13.7	15.4	17.0	18.6	19.1	
Change in working capital	15.7	-5.8	-4.0	-3.0	-2.6	-2.6	-2.7	-3.4	
Chg. in long-term provisions	3.7	0.4	-0.1	2.1	1.9	1.9	1.9	2.1	
Capex	-23.5	-13.2	-34.1	-42.0	-41.4	-40.9	-40.3	-16.3	
Cash flow	3.5	-4.4	-18.6	-17.5	-12.1	-6.9	-1.6	26.8	537.1
Present value	3.4	-4.1	-16.0	-13.9	-8.9	-4.7	-1.0	15.8	329.5
WACC	7.3%	7.4%	7.6%	7.6%	7.7%	7.7%	7.7%	7.7%	7.1%

DCF per share derived from	
Total present value	300.1
Mid-year adj. total present value	311.2
Net debt / cash at start of year	127.3
Financial assets	12.8
Provisions and off b/s debt	0.0
Equity value	196.8
No. of shares outstanding	61.2
<b>Discounted cash flow / share upside/(downside)</b>	<b>3.21 59.5%</b>

DCF avg. growth and earnings assumptions	
Planning horizon avg. revenue growth (2023E-2030E)	14.2%
Terminal value growth (2030E - infinity)	2.0%
Terminal year ROCE	7.7%
Terminal year WACC	7.1%

Terminal WACC derived from	
Cost of borrowing (before taxes)	7.5%
Long-term tax rate	35.0%
Equity beta	1.00
Unlevered beta (industry or company)	0.71
Target debt / equity	1.5
Relevered beta	1.40
Risk-free rate	2.0%
Equity risk premium	6.0%
Cost of equity	10.4%

<b>Share price</b>	<b>2.02</b>
--------------------	-------------

Sensitivity analysis DCF								
Change in WACC (%-points)		Long term growth					Share of present value	
		1.0%	1.5%	2.0%	2.5%	3.0%		
2.0%		0.7	0.9	1.2	1.5	1.8	2023E-2026E	-10.2%
1.0%		1.4	1.7	2.0	2.4	2.9	2027E-2030E	0.4%
0.0%		2.3	2.7	<b>3.2</b>	3.8	4.6	terminal value	109.8%
-1.0%		3.5	4.2	5.0	6.1	7.5		
-2.0%		5.4	6.5	8.0	10.1	13.1		

Source: AlsterResearch

## FCF Yield Model

Due to the fact that companies rarely bear sufficient resemblance to peers in terms of geographical exposure, size or competitive strength and in order to adjust for the pitfalls of weak long-term visibility, an Adjusted Free Cash Flow analysis (Adjusted FCF) has been conducted.

**The adjusted Free Cash Flow Yield results in a fair value between EUR -1.01 per share based on 2023E and EUR 3.38 per share on 2027E estimates.**

The main driver of this model is the level of return available to a controlling investor, influenced by the cost of that investors' capital (opportunity costs) and the purchase price – in this case the enterprise value of the company. Here, the adjusted FCF yield is used as a proxy for the required return and is defined as EBITDA less minority interest, taxes and investments required to maintain existing assets (maintenance capex).

FCF yield in EURm	2023E	2024E	2025E	2026E	2027E
<b>EBITDA</b>	<b>6.5</b>	<b>15.8</b>	<b>22.7</b>	<b>30.3</b>	<b>36.4</b>
- Maintenance capex	7.3	7.8	9.0	10.4	11.7
- Minorities	0.0	0.0	0.0	0.0	0.0
- tax expenses	-4.2	-2.6	-2.5	-1.8	-1.4
<b>= Adjusted FCF</b>	<b>3.4</b>	<b>10.6</b>	<b>16.2</b>	<b>21.7</b>	<b>26.1</b>
<b>Actual Market Cap</b>	<b>123.4</b>	<b>123.4</b>	<b>123.4</b>	<b>123.4</b>	<b>123.4</b>
+ Net debt (cash)	131.1	145.3	177.2	210.6	240.8
+ Pension provisions	0.0	0.0	0.0	0.0	0.0
+ Off B/S financing	0.0	0.0	0.0	0.0	0.0
- Financial assets	12.8	12.8	12.8	12.8	12.8
- Acc. dividend payments	0.0	0.0	0.0	0.0	0.0
<i>EV Reconciliations</i>	118.3	132.5	164.4	197.8	227.9
<b>= Actual EV'</b>	<b>241.7</b>	<b>255.9</b>	<b>287.8</b>	<b>321.2</b>	<b>351.3</b>
<b>Adjusted FCF yield</b>	<b>1.4%</b>	<b>4.2%</b>	<b>5.6%</b>	<b>6.8%</b>	<b>7.4%</b>
base hurdle rate	7.0%	7.0%	7.0%	7.0%	7.0%
ESG adjustment	1.0%	1.0%	1.0%	1.0%	1.0%
adjusted hurdle rate	6.0%	6.0%	6.0%	6.0%	6.0%
<b>Fair EV</b>	<b>56.6</b>	<b>177.2</b>	<b>269.5</b>	<b>362.1</b>	<b>434.9</b>
- <i>EV Reconciliations</i>	118.3	132.5	164.4	197.8	227.9
<b>Fair Market Cap</b>	<b>-61.7</b>	<b>44.7</b>	<b>105.0</b>	<b>164.3</b>	<b>207.0</b>
No. of shares (million)	61.2	61.2	61.2	61.2	61.2
<b>Fair value per share in EUR</b>	<b>-1.01</b>	<b>0.73</b>	<b>1.72</b>	<b>2.68</b>	<b>3.38</b>
<b>Premium (-) / discount (+)</b>	<b>-150.0%</b>	<b>-63.8%</b>	<b>-14.9%</b>	<b>33.2%</b>	<b>67.7%</b>

Sensitivity analysis FV						
<b>Adjusted hurdle rate</b>	4.0%	-0.5	2.2	3.9	5.6	6.9
	5.0%	-0.8	1.3	2.6	3.9	4.8
	<b>6.0%</b>	<b>-1.0</b>	<b>0.7</b>	<b>1.7</b>	<b>2.7</b>	<b>3.4</b>
	7.0%	-1.1	0.3	1.1	1.8	2.4
	8.0%	-1.2	0.0	0.6	1.2	1.6

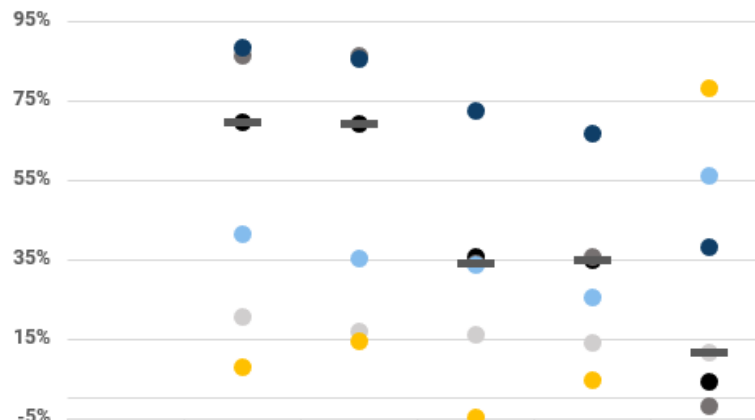
Source: Company data; AlsterResearch

Simply put, the model assumes that investors require companies to generate a minimum return on the investor's purchase price. The required after-tax return equals the model's hurdle rate of 7.0%. Anything less suggests the stock is expensive; anything more suggests the stock is cheap. **ESG adjustments might be applicable. A high score indicates high awareness for environmental, social or governance issues and thus might lower the overall risk an investment in the company might carry. A low score on the contrary might increase the risk of an investment and might therefore trigger a higher required hurdle rate.**

## Peer group analysis

A peer group or comparable company (“comps”) analysis is a methodology that calculates a company’s relative value – how much it should be worth based on how it compares to other similar companies. Given that **Photon Energy NV** differs quite significantly in terms of size, focus, financial health and growth trajectory, we regard our peer group analysis merely as a support for other valuation methods. The peer group of Photon Energy NV consists of the stocks displayed in the chart below. As of 15 November 2023 the median market cap of the peer group was EUR 793.5m, compared to EUR 123.4m for Photon Energy NV. In the period under review, the peer group was more profitable than Photon Energy NV. The expectations for sales growth are lower for the peer group than for Photon Energy NV.

### Peer Group – Key data



15-Nov-23

	Market Cap (EURm)	EBITDA margin 2023	EBITDA margin 2024	EBIT margin 2023	EBIT margin 2024	Sales CAGR 2022-2025
● Encavis AG	2.181	69,8%	69,4%	35,8%	34,9%	4,5%
● 7C Solarparken AG	271	86,4%	86,3%	34,2%	35,9%	-1,7%
● ABO Wind AG	414	20,7%	16,9%	16,4%	14,4%	11,7%
● Solaria Energia y Medio Ambiente SA	1.984	88,6%	85,5%	72,6%	66,9%	38,1%
● Greenergy Renovables SA	793	41,6%	35,5%	33,9%	25,6%	56,3%
● Photon Energy NV	123	8,2%	14,6%	-4,5%	4,8%	78,1%
– Peer Group Median	793	69,8%	69,4%	34,2%	34,9%	11,7%

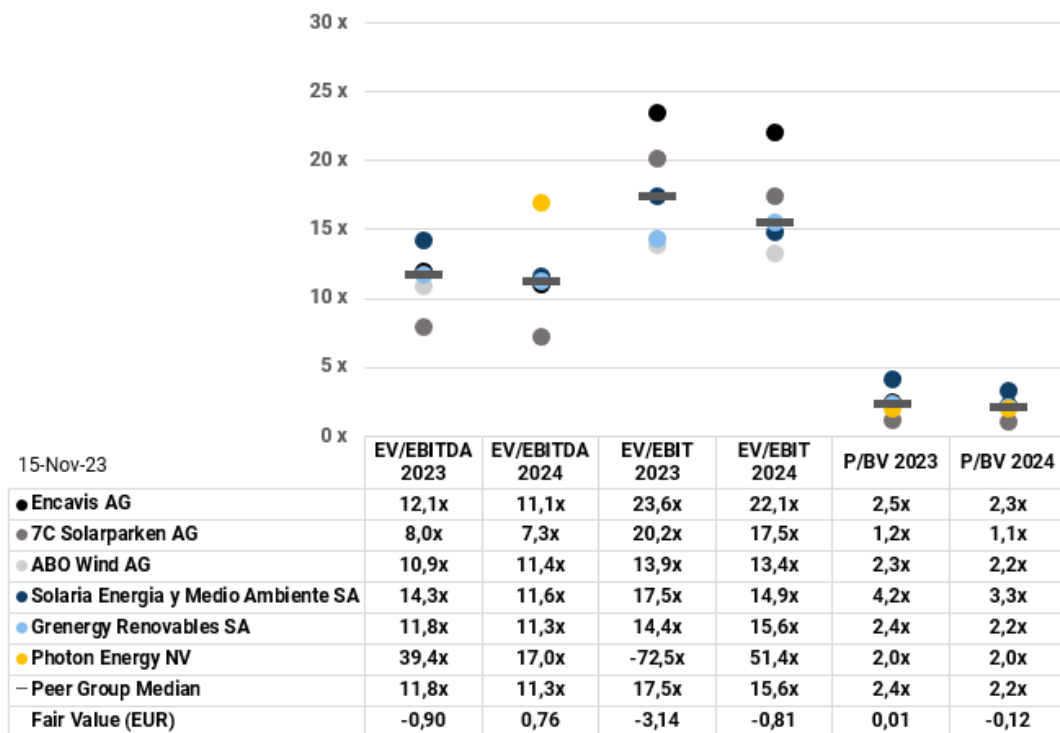
Source: Sentieo, AlsterResearch



Comparable company analysis operates under the assumption that similar companies will have similar valuation multiples. We use the following multiples: EV/EBITDA 2023, EV/EBITDA 2024, EV/EBIT 2023, EV/EBIT 2024, P/BV 2023 and P/BV 2024.

**Applying these to Photon Energy NV results in a range of fair values from EUR 0.01 to EUR 0.76.**

### Peer Group – Multiples and valuation

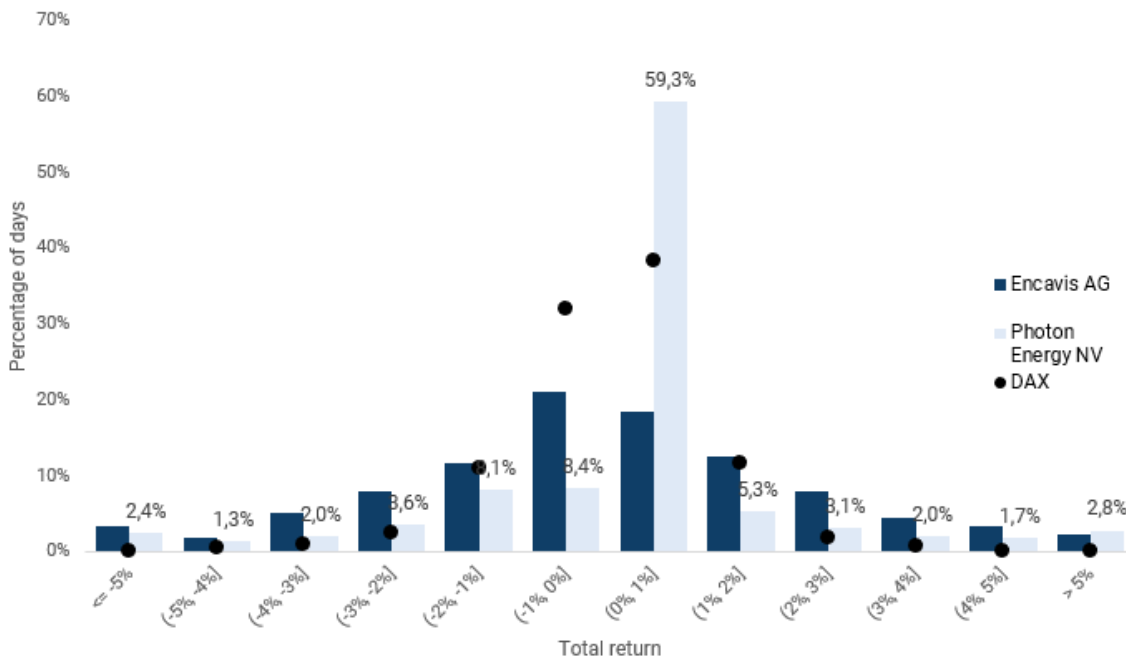


Source: Sentio, AlsterResearch

# Risk

The chart displays the **distribution of daily returns of Photon Energy NV** over the last 3 years, compared to the same distribution for Encavis AG. We have also included the distribution for the index DAX. The distribution gives a better understanding of risk than measures like volatility, which assume that log returns are normally distributed. In reality, they are skewed (down moves are larger) and have fat tails (large moves occur more often than predicted). Also, volatility treats up and down moves the same, while investors are more worried about down moves. For Photon Energy NV, the worst day during the past 3 years was 30/06/2021 with a share price decline of -29.6%. The best day was 05/01/2021 when the share price increased by 15.3%.

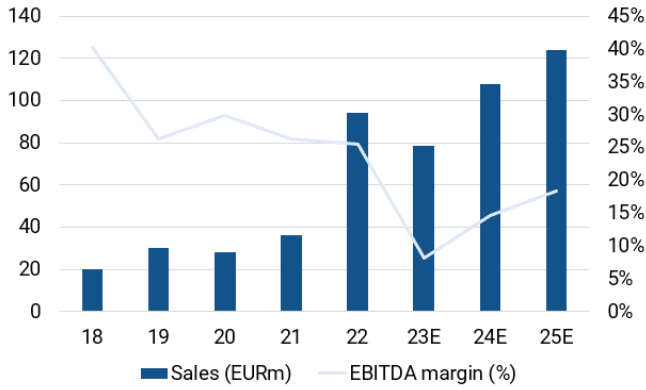
**Risk – Daily Returns Distribution (trailing 3 years)**



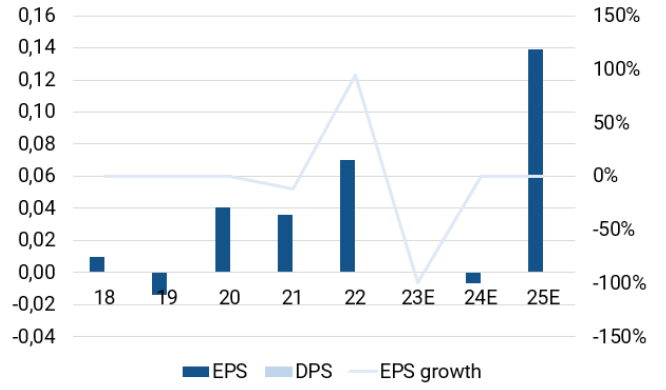
Source: Sentio, AlsterResearch

# Financials in six charts

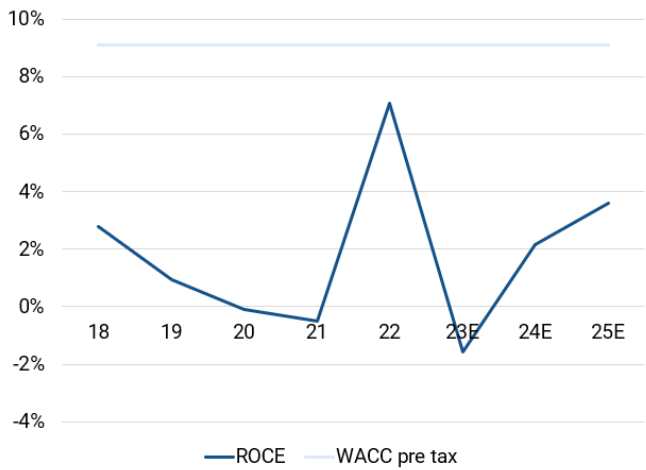
**Sales vs. EBITDA margin development**



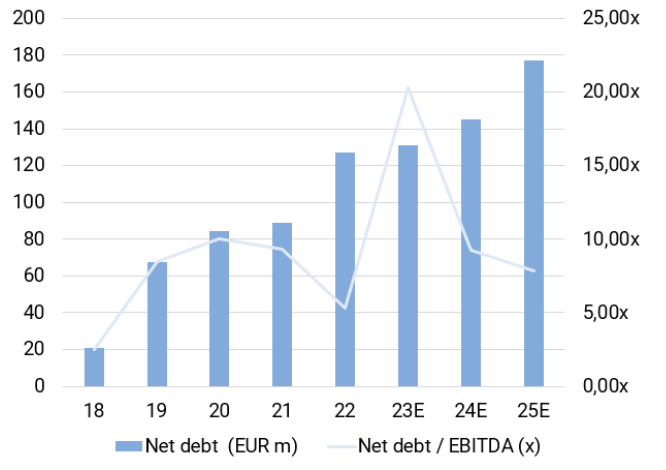
**EPS, DPS in EUR & yoy EPS growth**



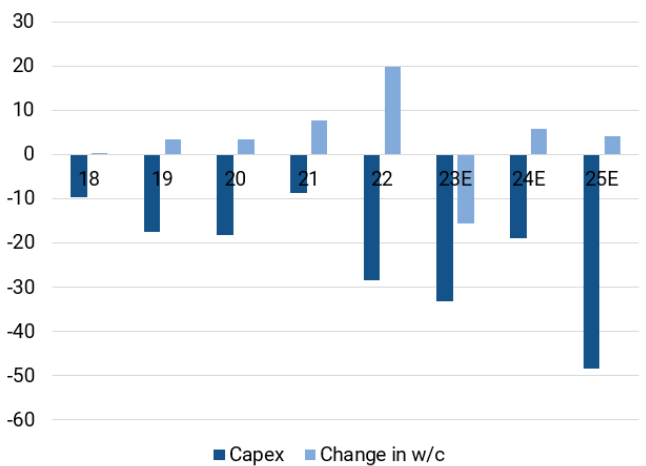
**ROCE vs. WACC (pre tax)**



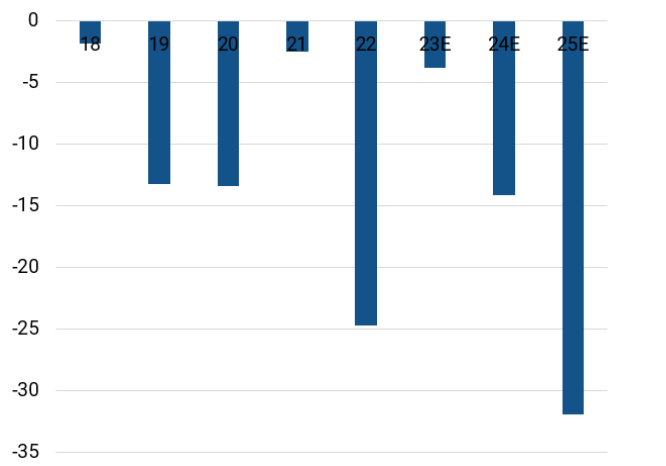
**Net debt and net debt/EBITDA**



**Capex & chgn in w/c requirements in EURm**



**Free Cash Flow in EURm**



Source: Company data, AlsterResearch

## Financials

Profit and loss (EURm)	2020	2021	2022	2023E	2024E	2025E
<b>Net sales</b>	<b>28.3</b>	<b>36.4</b>	<b>94.2</b>	<b>78.7</b>	<b>107.9</b>	<b>124.1</b>
Sales growth	-6.3%	28.7%	159.1%	-16.4%	37.1%	15.0%
Change in finished goods and work-in-process	0.0	0.0	0.0	0.0	0.0	0.0
<b>Total sales</b>	<b>28.3</b>	<b>36.4</b>	<b>94.2</b>	<b>78.7</b>	<b>107.9</b>	<b>124.1</b>
Material expenses	4.6	12.7	44.1	31.4	32.6	34.0
<b>Gross profit</b>	<b>23.6</b>	<b>23.6</b>	<b>50.1</b>	<b>47.4</b>	<b>75.3</b>	<b>90.0</b>
Other operating income	0.4	0.6	0.6	0.8	1.1	1.2
Personnel expenses	5.8	6.7	9.5	26.0	39.1	46.2
Other operating expenses	9.7	7.7	17.0	15.7	21.6	22.3
<b>EBITDA</b>	<b>8.4</b>	<b>9.6</b>	<b>24.1</b>	<b>6.5</b>	<b>15.8</b>	<b>22.7</b>
Depreciation	8.3	10.7	9.0	9.1	9.7	11.3
EBITA	0.1	-1.1	15.1	-2.6	6.1	11.4
Amortisation of goodwill and intangible assets	0.3	-0.2	0.6	0.9	0.8	0.8
<b>EBIT</b>	<b>-0.1</b>	<b>-0.9</b>	<b>14.5</b>	<b>-3.5</b>	<b>5.2</b>	<b>10.6</b>
Financial result	-6.4	-5.2	-8.3	-10.4	-13.9	-19.0
Recurring pretax income from continuing operations	-6.5	-6.1	6.2	-13.9	-8.7	-8.4
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0	0.0
Earnings before taxes	-6.5	-6.1	6.2	-13.9	-8.7	-8.4
Taxes	2.2	0.5	3.5	-4.2	-2.6	-2.5
Net income from continuing operations	-8.7	-6.6	2.8	-9.8	-6.1	-5.9
Result from discontinued operations (net of tax)	10.8	8.5	1.5	9.8	5.7	14.4
<b>Net income</b>	<b>2.1</b>	<b>2.0</b>	<b>4.3</b>	<b>0.0</b>	<b>-0.4</b>	<b>8.5</b>
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0
Net profit (reported)	2.1	2.0	4.3	0.0	-0.4	8.5
Average number of shares	51.20	54.36	61.24	61.24	61.24	61.24
<b>EPS reported</b>	<b>0.04</b>	<b>0.04</b>	<b>0.07</b>	<b>0.00</b>	<b>-0.01</b>	<b>0.14</b>

Profit and loss (common size)	2020	2021	2022	2023E	2024E	2025E
<b>Net sales</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Change in finished goods and work-in-process	0%	0%	0%	0%	0%	0%
<b>Total sales</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
Material expenses	16%	35%	47%	40%	30%	27%
<b>Gross profit</b>	<b>84%</b>	<b>65%</b>	<b>53%</b>	<b>60%</b>	<b>70%</b>	<b>73%</b>
Other operating income	1%	2%	1%	1%	1%	1%
Personnel expenses	21%	19%	10%	33%	36%	37%
Other operating expenses	34%	21%	18%	20%	20%	18%
<b>EBITDA</b>	<b>30%</b>	<b>26%</b>	<b>26%</b>	<b>8%</b>	<b>15%</b>	<b>18%</b>
Depreciation	29%	29%	10%	12%	9%	9%
EBITA	0%	-3%	16%	-3%	6%	9%
Amortisation of goodwill and intangible assets	1%	-1%	1%	1%	1%	1%
<b>EBIT</b>	<b>-1%</b>	<b>-2%</b>	<b>15%</b>	<b>-4%</b>	<b>5%</b>	<b>9%</b>
Financial result	-23%	-14%	-9%	-13%	-13%	-15%
Recurring pretax income from continuing operations	-23%	-17%	7%	-18%	-8%	-7%
Extraordinary income/loss	0%	0%	0%	0%	0%	0%
Earnings before taxes	-23%	-17%	7%	-18%	-8%	-7%
Taxes	8%	1%	4%	-5%	-2%	-2%
Net income from continuing operations	-31%	-18%	3%	-12%	-6%	-5%
Result from discontinued operations (net of tax)	38%	23%	2%	12%	5%	12%
<b>Net income</b>	<b>7%</b>	<b>5%</b>	<b>5%</b>	<b>0%</b>	<b>-0%</b>	<b>7%</b>
Minority interest	0%	0%	0%	0%	0%	0%
<b>Net profit (reported)</b>	<b>7%</b>	<b>5%</b>	<b>5%</b>	<b>0%</b>	<b>-0%</b>	<b>7%</b>

Source: Company data; AlsterResearch

Balance sheet (EURm)	2020	2021	2022	2023E	2024E	2025E
<b>Intangible assets (exl. Goodwill)</b>	<b>1.3</b>	<b>0.8</b>	<b>13.0</b>	<b>12.1</b>	<b>11.3</b>	<b>10.5</b>
Goodwill	0.0	0.0	0.0	0.0	0.0	0.0
Property, plant and equipment	126.3	127.5	145.3	169.5	178.7	215.9
Financial assets	7.5	14.1	12.8	12.8	12.8	12.8
<b>FIXED ASSETS</b>	<b>135.1</b>	<b>142.5</b>	<b>171.2</b>	<b>194.4</b>	<b>202.8</b>	<b>239.2</b>
Inventories	1.0	2.2	15.8	6.9	7.1	7.5
Accounts receivable	6.1	9.1	27.8	19.4	26.6	30.6
Other current assets	2.2	2.9	3.2	3.2	3.2	3.2
Liquid assets	14.3	39.4	21.4	13.9	39.7	62.8
Deferred taxes	0.0	0.3	0.0	0.0	0.0	0.0
Deferred charges and prepaid expenses	0.3	0.3	0.9	0.6	0.9	1.0
<b>CURRENT ASSETS</b>	<b>23.9</b>	<b>54.2</b>	<b>69.1</b>	<b>44.0</b>	<b>77.5</b>	<b>105.0</b>
<b>TOTAL ASSETS</b>	<b>158.9</b>	<b>196.6</b>	<b>240.2</b>	<b>238.4</b>	<b>280.3</b>	<b>344.2</b>
<b>SHAREHOLDERS EQUITY</b>	<b>40.2</b>	<b>51.7</b>	<b>60.7</b>	<b>60.7</b>	<b>60.3</b>	<b>68.9</b>
MINORITY INTEREST	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2
Long-term debt	92.8	100.0	138.2	135.0	175.0	230.0
Provisions for pensions and similar obligations	0.0	0.0	0.0	0.0	0.0	0.0
Other provisions	10.8	11.1	12.0	15.7	16.2	16.1
<b>Non-current liabilities</b>	<b>103.6</b>	<b>111.1</b>	<b>150.2</b>	<b>150.7</b>	<b>191.2</b>	<b>246.1</b>
short-term liabilities to banks	6.0	28.5	10.4	10.0	10.0	10.0
Accounts payable	3.7	2.3	12.4	7.7	8.0	8.4
Advance payments received on orders	0.0	0.0	0.0	0.0	0.0	0.0
Other liabilities (incl. from lease and rental contracts)	4.9	3.2	4.4	7.1	8.6	8.7
Deferred taxes	0.6	0.0	2.3	2.3	2.3	2.3
Deferred income	0.0	0.0	0.0	0.0	0.0	0.0
<b>Current liabilities</b>	<b>15.2</b>	<b>34.0</b>	<b>29.5</b>	<b>27.2</b>	<b>29.0</b>	<b>29.4</b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS EQUITY</b>	<b>158.9</b>	<b>196.6</b>	<b>240.2</b>	<b>238.4</b>	<b>280.3</b>	<b>344.2</b>

Balance sheet (common size)	2020	2021	2022	2023E	2024E	2025E
<b>Intangible assets (excl. Goodwill)</b>	<b>1%</b>	<b>0%</b>	<b>5%</b>	<b>5%</b>	<b>4%</b>	<b>3%</b>
Goodwill	0%	0%	0%	0%	0%	0%
Property, plant and equipment	80%	65%	60%	71%	64%	63%
Financial assets	5%	7%	5%	5%	5%	4%
<b>FIXED ASSETS</b>	<b>85%</b>	<b>72%</b>	<b>71%</b>	<b>82%</b>	<b>72%</b>	<b>69%</b>
Inventories	1%	1%	7%	3%	3%	2%
Accounts receivable	4%	5%	12%	8%	9%	9%
Other current assets	1%	1%	1%	1%	1%	1%
Liquid assets	9%	20%	9%	6%	14%	18%
Deferred taxes	0%	0%	0%	0%	0%	0%
Deferred charges and prepaid expenses	0%	0%	0%	0%	0%	0%
<b>CURRENT ASSETS</b>	<b>15%</b>	<b>28%</b>	<b>29%</b>	<b>18%</b>	<b>28%</b>	<b>31%</b>
<b>TOTAL ASSETS</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>
<b>SHAREHOLDERS EQUITY</b>	<b>25%</b>	<b>26%</b>	<b>25%</b>	<b>25%</b>	<b>22%</b>	<b>20%</b>
MINORITY INTEREST	-0%	-0%	-0%	-0%	-0%	-0%
Long-term debt	58%	51%	58%	57%	62%	67%
Provisions for pensions and similar obligations	0%	0%	0%	0%	0%	0%
Other provisions	7%	6%	5%	7%	6%	5%
<b>Non-current liabilities</b>	<b>65%</b>	<b>57%</b>	<b>63%</b>	<b>63%</b>	<b>68%</b>	<b>72%</b>
short-term liabilities to banks	4%	14%	4%	4%	4%	3%
Accounts payable	2%	1%	5%	3%	3%	2%
Advance payments received on orders	0%	0%	0%	0%	0%	0%
Other liabilities (incl. from lease and rental contracts)	3%	2%	2%	3%	3%	3%
Deferred taxes	0%	0%	1%	1%	1%	1%
Deferred income	0%	0%	0%	0%	0%	0%
<b>Current liabilities</b>	<b>10%</b>	<b>17%</b>	<b>12%</b>	<b>11%</b>	<b>10%</b>	<b>9%</b>
<b>TOTAL LIABILITIES AND SHAREHOLDERS EQUITY</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Company data; AlsterResearch

Cash flow statement (EURm)	2020	2021	2022	2023E	2024E	2025E
Net profit/loss	-6.5	-5.9	6.2	0.0	-0.4	8.5
Depreciation of fixed assets (incl. leases)	8.3	10.7	8.9	9.1	9.7	11.3
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.0	0.7	0.9	0.8	0.8
Others	6.4	9.0	7.8	3.7	0.4	-0.1
Cash flow from operations before changes in w/c	8.2	13.7	23.6	13.7	10.6	20.6
Increase/decrease in inventory	0.1	-1.2	-13.4	9.0	-0.3	-0.3
Increase/decrease in accounts receivable	-1.8	-1.6	-10.9	8.3	-7.2	-4.0
Increase/decrease in accounts payable	-1.6	-2.4	5.0	-4.7	0.3	0.4
Increase/decrease in other w/c positions	-0.1	-2.5	-0.5	3.0	1.3	-0.1
Increase/decrease in working capital	-3.3	-7.6	-19.9	15.7	-5.8	-4.0
<b>Cash flow from operating activities</b>	<b>4.8</b>	<b>6.1</b>	<b>3.7</b>	<b>29.4</b>	<b>4.7</b>	<b>16.5</b>
CAPEX	-18.3	-8.6	-28.4	-33.2	-18.9	-48.5
Payments for acquisitions	-0.0	0.0	-6.2	0.0	0.0	0.0
Financial investments	-1.9	-5.6	0.4	0.0	0.0	0.0
Income from asset disposals	0.0	0.0	0.0	0.0	0.0	0.0
<b>Cash flow from investing activities</b>	<b>-20.2</b>	<b>-14.2</b>	<b>-34.3</b>	<b>-33.2</b>	<b>-18.9</b>	<b>-48.5</b>
Cash flow before financing	-15.3	-8.1	-30.6	-3.8	-14.2	-31.9
Increase/decrease in debt position	18.6	29.8	18.0	-3.6	40.0	55.0
Purchase of own shares	0.0	0.0	0.0	0.0	0.0	0.0
Capital measures	0.0	0.0	0.0	0.0	0.0	0.0
Dividends paid	0.0	0.0	0.0	0.0	0.0	0.0
Others	-6.7	-6.9	-8.7	0.0	0.0	0.0
Effects of exchange rate changes on cash	0.0	0.0	0.0	0.0	0.0	0.0
<b>Cash flow from financing activities</b>	<b>11.9</b>	<b>22.9</b>	<b>9.3</b>	<b>-3.6</b>	<b>40.0</b>	<b>55.0</b>
Increase/decrease in liquid assets	-3.4	14.8	-21.2	-7.5	25.8	23.1
<b>Liquid assets at end of period</b>	<b>9.9</b>	<b>32.5</b>	<b>11.3</b>	<b>3.8</b>	<b>29.6</b>	<b>52.7</b>

Source: Company data; AlsterResearch

Regional sales split (EURm)	2020	2021	2022	2023E	2024E	2025E
Domestic	0.0	0.0	0.0	0.0	0.0	0.0
Europe (ex domestic)	22.8	29.3	89.1	76.2	103.3	119.6
The Americas	0.0	0.0	0.0	0.0	0.0	0.0
Asia	0.0	0.0	0.0	0.0	0.0	0.0
Rest of World	5.5	7.1	5.1	2.5	4.6	4.4
<b>Total sales</b>	<b>28.3</b>	<b>36.4</b>	<b>94.2</b>	<b>78.7</b>	<b>107.9</b>	<b>124.1</b>

Regional sales split (common size)	2020	2021	2022	2023E	2024E	2025E
Domestic	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Europe (ex domestic)	80.6%	80.6%	94.6%	96.8%	95.7%	96.4%
The Americas	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Asia	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Rest of World	19.4%	19.4%	5.4%	3.2%	4.3%	3.6%
<b>Total sales</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>	<b>100%</b>

Source: Company data; AlsterResearch

Ratios	2020	2021	2022	2023E	2024E	2025E
<b>Per share data</b>						
Earnings per share reported	0.04	0.04	0.07	0.00	-0.01	0.14
Cash flow per share	-0.04	-0.04	-0.06	0.36	-0.05	0.12
Book value per share	0.79	0.95	0.99	0.99	0.99	1.12
Dividend per share	0.00	0.00	0.00	0.00	0.00	0.00
<b>Valuation</b>						
P/E	49.5x	56.0x	28.8x	5,847.1x	-303.4x	14.5x
P/CF	-57.2x	-45.2x	-35.9x	5.6x	-40.8x	16.5x
P/BV	2.6x	2.1x	2.0x	2.0x	2.0x	1.8x
Dividend yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield (%)	-1.7%	-2.2%	-2.8%	18.0%	-2.5%	6.1%
EV/Sales	7.4x	5.8x	2.7x	3.2x	2.5x	2.4x
EV/EBITDA	24.6x	22.2x	10.4x	39.4x	17.0x	13.2x
EV/EBIT	-1,464.3x	-249.4x	17.2x	-72.5x	51.4x	28.4x
<b>Income statement (EURm)</b>						
Sales	28.3	36.4	94.2	78.7	107.9	124.1
yoy chg in %	-6.3%	28.7%	159.1%	-16.4%	37.1%	15.0%
Gross profit	23.6	23.6	50.1	47.4	75.3	90.0
Gross margin in %	83.6%	65.0%	53.1%	60.2%	69.8%	72.6%
EBITDA	8.4	9.6	24.1	6.5	15.8	22.7
EBITDA margin in %	29.9%	26.4%	25.5%	8.2%	14.6%	18.3%
EBIT	-0.1	-0.9	14.5	-3.5	5.2	10.6
EBIT margin in %	-0.5%	-2.3%	15.4%	-4.5%	4.8%	8.5%
Net profit	2.1	2.0	4.3	0.0	-0.4	8.5
<b>Cash flow statement (EURm)</b>						
CF from operations	4.8	6.1	3.7	29.4	4.7	16.5
Capex	-18.3	-8.6	-28.4	-33.2	-18.9	-48.5
Maintenance Capex	6.6	8.5	7.2	7.3	7.8	9.0
Free cash flow	-13.5	-2.5	-24.7	-3.8	-14.2	-31.9
<b>Balance sheet (EURm)</b>						
Intangible assets	1.3	0.8	13.0	12.1	11.3	10.5
Tangible assets	126.3	127.5	145.3	169.5	178.7	215.9
Shareholders' equity	40.2	51.7	60.7	60.7	60.3	68.9
Pension provisions	0.0	0.0	0.0	0.0	0.0	0.0
Liabilities and provisions	109.6	139.6	160.6	160.7	201.2	256.1
Net financial debt	84.5	89.1	127.3	131.1	145.3	177.2
w/c requirements	3.5	9.0	31.2	18.6	25.7	29.7
<b>Ratios</b>						
ROE	5.2%	3.8%	7.0%	0.0%	-0.7%	12.4%
ROCE	-0.1%	-0.4%	6.6%	-1.6%	2.0%	3.3%
Net gearing	210.3%	172.4%	209.6%	215.9%	240.8%	257.4%
Net debt / EBITDA	10.0x	9.3x	5.3x	20.3x	9.2x	7.8x

Source: Company data; AlsterResearch

## Conflicts of interest

Disclosures regarding research publications of SRH AlsterResearch AG pursuant to section 85 of the German Securities Trading Act (WpHG) and distributed in the UK under an EEA branch passport, subject to the FCA requirements on research recommendation disclosures. It is essential that any research recommendation is fairly presented and discloses interests of indicates relevant conflicts of interest. Pursuant to section 85 of the German Securities Trading Act (WpHG) a research report has to point out possible conflicts of interest in connection with the analyzed company. Further to this, under the FCA's rules on research recommendations, any conflicts of interest in connection with the recommendation must be disclosed. A conflict of interest is presumed to exist in particular if SRH AlsterResearch AG

- (1) or its affiliate(s) (either in its own right or as part of a consortium) within the past twelve months, acquired the financial instruments of the analyzed company,
- (2) has entered into an agreement on the production of the research report with the analyzed company,
- (3) or its affiliate(s) has, within the past twelve months, been party to an agreement on the provision of investment banking services with the analyzed company or have received services or a promise of services under the term of such an agreement,
- (4) or its affiliate(s) holds a) 5% or more of the share capital of the analyzed company, or b) the analyzed company holds 5% or more of the share capital of SRH AlsterResearch AG or its affiliate(s),
- (5) or its affiliate(s) holds a net long (a) or a net short (b) position of 0.5% of the outstanding share capital of the analyzed company or derivatives thereof,
- (6) or its affiliate(s) is a market maker or liquidity provider in the financial instruments of the issuer,
- (7) or the analyst has any other significant financial interests relating to the analyzed company such as, for example, exercising mandates in the interest of the analyzed company or a significant conflict of interest with respect to the issuer,
- (8) The research report has been made available to the company prior to its publication. Thereafter, only factual changes have been made to the report.

Conflicts of interest that existed at the time when this research report was published:

Company	Disclosure
Photon Energy NV	2, 8



# Important disclosures

**1. General Information/Liabilities** This research report has been produced for the information purposes of institutional investors only, and is not in any way a personal recommendation, offer or solicitation to buy or sell the financial instruments mentioned herein. The document is confidential and is made available by SRH AlsterResearch AG, exclusively to selected recipients [in DE, GB, FR, CH, US, UK, Scandinavia, and Benelux or, in individual cases, also in other countries]. A distribution to private investors in the sense of the German Securities Trading Act (WpHG) is excluded. It is not allowed to pass the research report on to persons other than the intended recipient without the permission of SRH AlsterResearch AG. Reproduction of this document, in whole or in part, is not permitted without prior permission SRH AlsterResearch AG. All rights reserved. Under no circumstances shall SRH AlsterResearch AG, any of its employees involved in the preparation, have any liability for possible errors or incompleteness of the information included in this research report – neither in relation to indirect or direct nor consequential damages. Liability for damages arising either directly or as a consequence of the use of information, opinions and estimates is also excluded. Past performance of a financial instrument is not necessarily indicative of future performance.

**2. Responsibilities** This research report was prepared by the research analyst named on the front page (the "Producer"). The Producer is solely responsible for the views and estimates expressed in this report. The report has been prepared independently. The content of the research report was not influenced by the issuer of the analyzed financial instrument at any time. It may be possible that parts of the research report were handed out to the issuer for information purposes prior to the publication without any major amendments being made thereafter.

**3. Organizational Requirements** SRH AlsterResearch AG took internal organizational and regulative precautions to avoid or accordingly disclose possible conflicts of interest in connection with the preparation and distribution of the research report. All members of AlsterResearch AG involved in the preparation of the research report are subject to internal compliance regulations. No part of the Producer's compensation is directly or indirectly related to the preparation of this financial analysis. In case a research analyst or a closely related person is confronted with a conflict of interest, the research analyst is restricted from covering this company.

**4. Information Concerning the Methods of Valuation/Update** The determination of the fair value per share, i.e. the price target, and the resultant rating is done on the basis of the adjusted free cash flow (adj. FCF) method and on the basis of the discounted cash flow – DCF model. Furthermore, a peer group comparison is made. The adj. FCF method is based on the assumption that investors purchase assets only at a price (enterprise value) at which the operating cash flow return after taxes on this investment exceeds their opportunity costs in the form of a hurdle rate. The operating cash flow is calculated as EBITDA less maintenance capex and taxes. Within the framework of the DCF approach, the future free cash flows are calculated initially on the basis of a fictitious capital structure of 100% equity, i.e. interest and repayments on debt capital are not factored in initially. The adjustment towards the actual capital structure is done by discounting the calculated free cash flows with the weighted average cost of capital (WACC), which takes into account both the cost of equity capital and the cost of debt. After discounting, the calculated total enterprise value is reduced by the interest-bearing debt capital in order to arrive at the equity value. Detailed information on the valuation principles and methods used and the underlying assumptions can be found at <https://www.alsterresearch.com>.

SRH AlsterResearch AG uses the following three-step rating system for the analyzed companies:

- **Speculative (Spec.) BUY:** Sustainable upside potential of more than 25% within 12 months, above average risk
- **BUY:** Sustainable upside potential of more than 10% within 12 months
- **SELL:** Sustainable downside potential of more than 10% within 12 months.
- **HOLD:** Upside/downside potential is limited. No immediate catalyst visible.

NB: The ratings of SRH AlsterResearch AG are not based on a performance that is expected to be "relative" to the market.

The decision on the choice of the financial instruments analyzed in this document was solely made by SRH AlsterResearch AG. The opinions and estimates in this research report are subject to change without notice. It is within the discretion of SRH AlsterResearch AG whether and when it publishes an update to this research report, but in general updates are created on a regular basis, after 6 months at the latest. A sensitivity analysis is included and published in company's initial studies.

**5. Date and time of first publication of this financial analysis**  
15-Nov-23 09:10:33

## 6. Risk information

- Stock exchange investments and investments in companies (shares) are always speculative and involve the risk of total loss.
- This is particularly true in respect of investments in companies which are not established and/or small and have no established business or corporate assets.
- Share prices may fluctuate significantly. This is particularly true for shares with low liquidity (market breadth). Even small orders can have a significant impact on the share price.
- In the case of shares in narrow markets, it may also happen that there is no or very little actual trading there and that published prices are not based on actual trading but have only been provided by a stockbroker.
- In such markets a shareholder cannot expect to find a buyer for his shares at all and/or at reasonable prices. In such narrow markets there is a very high possibility of manipulating prices and in such markets there are often considerable price fluctuations.
- An investment in shares with low liquidity and low market capitalization is therefore highly speculative and represents a very high risk.
- There is no regulated market for unlisted shares and securities and a sale is not possible or only possible on an individual basis.

**7. Major Sources of Information** Part of the information required for this research report was made available by the issuer of the financial instrument. Furthermore, this report is based on publicly available sources (such as, for example, Bloomberg, Reuters, VWD-Trader and the relevant daily press) believed to be reliable. SRH AlsterResearch AG has checked the information for plausibility but not for accuracy or completeness.

**8. Competent Supervisory Authority** SRH AlsterResearch AG are under supervision of the BaFin – German Federal Financial Supervisory Authority (Bundesanstalt für Finanzdienstleistungsaufsicht), Graurheindorfer Straße 108, 53117 Bonn and Marie-Curie-Straße 24 – 28, 60439 Frankfurt a.M. This document is distributed in the UK under a MiFID EEA branch passport and in compliance with the applicable FCA requirements.

**9. Specific Comments for Recipients Outside of Germany** This research report is subject to the law of the Federal Republic of Germany. The distribution of this information to other states in particular to the USA, Canada, Australia and Japan may be restricted or prohibited by the laws applicable within this state.

**10. Miscellaneous** According to Article 4(1) No. i of the delegated regulation 2016/958 supplementing regulation 596/2014 of the European Parliament, further information regarding investment recommendations of the last 12 months are published free of charge under <https://www.alsterresearch.com>.

## Contacts

SRH AlsterResearch AG  
Mittelweg 142  
20148 Hamburg

Tel: +49 40 309 293-52  
E-Mail: [info@alsterresearch.com](mailto:info@alsterresearch.com)

### Team Assistant

**HANNAH GABERT**  
Team Assistant  
Tel: +49 40 309 293-52  
E-Mail: [h.gabert@alsterresearch.com](mailto:h.gabert@alsterresearch.com)

### Sales

**MARKUS KÖNIG-WEISS**  
Head of Sales  
Tel: +49 40 309 293-52  
E-Mail: [mkw@alsterresearch.com](mailto:mkw@alsterresearch.com)

### Research

**HARALD HOF**  
Senior Analyst  
Tel: +49 40 309 293-53  
E-Mail: [h.hof@alsterresearch.com](mailto:h.hof@alsterresearch.com)

**LEON MÜHLENBRUCH**  
Analyst  
Tel: +49 40 309 293-57  
E-Mail: [l.muehlenbruch@alsterresearch.com](mailto:l.muehlenbruch@alsterresearch.com)

**LEVENT YILMAZ**  
Senior Analyst  
Tel: +49 40 309 293-114  
E-Mail: [l.yilmaz@alsterresearch.com](mailto:l.yilmaz@alsterresearch.com)

**THOMAS WISSLER**  
Senior Analyst  
Tel: +49 40 309 293-58  
E-Mail: [t.wissler@alsterresearch.com](mailto:t.wissler@alsterresearch.com)

**DR. OLIVER WOJAHN, CFA**  
Senior Analyst  
Tel: +49 40 309 293-55  
E-Mail: [o.wojahn@alsterresearch.com](mailto:o.wojahn@alsterresearch.com)

**ALEXANDER ZIENKOWICZ**  
Senior Analyst  
Tel: +49 40 309 293-56  
E-Mail: [a.zienkowicz@alsterresearch.com](mailto:a.zienkowicz@alsterresearch.com)

mwb fairtrade Wertpapierhandelsbank AG  
Rottenbucher Straße 28  
82166 Gräfelfing

Tel: +49 89 85852-0  
Fax: +49 89 85852-505  
E-Mail: [info@mwbfairtrade.com](mailto:info@mwbfairtrade.com)

### Equity Capital Markets / Trading

**KAI JORDAN**  
Member of the Board  
Tel: +49 40 36 0995-22  
E-Mail: [kjordan@mwbfairtrade.com](mailto:kjordan@mwbfairtrade.com)

**ALEXANDER DEUSS**  
Head of Institutional Sales  
Tel: +49 40 36 0995-22  
E-Mail: [adeuss@mwbfairtrade.com](mailto:adeuss@mwbfairtrade.com)

**SASCHA GUENON**  
Head of Designated Sponsoring  
Tel: +49 40 360 995 - 23  
E-Mail: [sguenon@mwbfairtrade.com](mailto:sguenon@mwbfairtrade.com)

Our research can be found under



<b>RESEARCH HUB</b>	<a href="http://www.research-hub.de">www.research-hub.de</a>
<b>BLOOMBERG</b>	<a href="http://www.bloomberg.com">www.bloomberg.com</a>
<b>FACTSET</b>	<a href="http://www.factset.com">www.factset.com</a>
<b>THOMSON REUTERS / REFINITIV</b>	<a href="http://www.refinitiv.com">www.refinitiv.com</a>
<b>CAPITALIQ</b>	<a href="http://www.capitaliq.com">www.capitaliq.com</a>