

Photon Energy NV

Netherlands | Renewables | MCap EUR 70.4m

19 November 2024

UPDATE



Good Q3, but increased regulatory risks; rating under review

What's it all about?

Photon Energy's Q3 report showed strong results, with a 19% yoy revenue increase driven by power generation, capacity market contracts and EPC growth, despite weak PV component trading. EBITDA margin improved significantly to 16.6%, and good cash flow management led to a free cash flow of EUR 4.0m. Equity increased sequentially by EUR 1m. However, regulatory challenges loom, including unfavorable pricing conditions in Romania and reduced capacity market revenues in Poland. Proposed Czech measures could severely impact PV project revenues and asset valuations. We are adjusting our model to reflect the regulatory changes in Romania and Poland, aligning FY24 estimates with the updated company guidance. We have not adjusted our estimates for potential changes in Czech regulation. Pending the outcome of the dispute with the Czech state, we have put our rating and target price under review.

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

under review (Spec. BUY)

Target price	EUR na (2.50)
Current price	EUR 1.15
Up/downside	NaN%

 ResearchHub

MAIN AUTHOR

Dr. Oliver Wojahn, CFA

o.wojahn@mwb-research.com

+49 40 309 293-55

mwb-research.com

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

Photon Energy NV

Netherlands | Renewables | MCap EUR 70.4m | EV EUR 237.8m

under review (Spec. BUY)

Target price EUR na (2.50)
Current price EUR 1.15
Up/downside NaN%

MAIN AUTHOR

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

Good Q3, but increased regulatory risks; rating under review

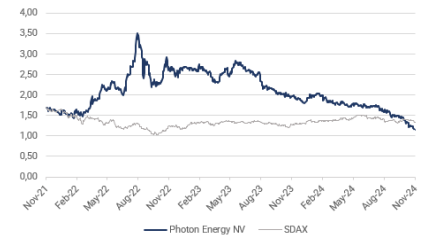
Solid Q3 results published. Photon Energy has published its Q3 report. The numbers were solid, with revenues up 19% yoy, with the continued weak performance of the technology division (PV component trading) more than offset by growth in power generation revenues and strong business from capacity market contracts and the EPC division. The Q3 EBITDA margin of 16.6% was up a strong 660 bps yoy, benefiting from an increasing share of high-margin power generation.

Good cash flow, improving balance sheet. Q3 operating cash flow of EUR 6.9m was around EUR 1.4m higher than the previous year, supported by good working capital management, particularly in terms of inventories. This resulted in a free cash flow of EUR 4.0m. The Q3 net loss of EUR 3.0m was turned into a positive total comprehensive income of EUR 1.0m, supported by a revaluation of PP&E of EUR 2.2m and FX gains of EUR 2.5m. As a result, equity increased sequentially from EUR 63.3m to EUR 64.3m, resulting in an adjusted equity ratio of 26.8%.

Unfavorable regulation in Romania and Poland. So while the third quarter was good, developments outside Photon Energy's control could prove very challenging. In Romania, the preferential treatment period for new solar installations has been shortened, resulting in an earlier effective date for unfavorable pricing conditions from 1 October 2024. The average price per MWh realized by Photon Energy in Romania fell from EUR 130 in September to EUR 52 in October. The company is taking measures to mitigate the negative impact, but the extent to which this can be done is currently unclear. In addition, minor regulatory changes in Poland will reduce the expected revenues from capacity market contracts to EUR 21m from the previously expected EUR 24m.

Significant regulatory risk in Czech Republic. Most worryingly, the Czech Parliament is currently debating measures that would significantly reduce support for PV projects. These measures include the removal of support during periods of negative electricity prices, a reduction in the IRR overcompensation range and an extension of the expected lifetime of PV assets by 10 to 20 years from the current 20 years.

- continued next page -



Source: Company data, mwb research

High/low 52 weeks 2.06 / 1.15
Price/Book Ratio 1.0x

Ticker / Symbols

ISIN NL0010391108
WKN A1T9KW
Bloomberg P7V:GR

Changes in estimates

		Sales	EBIT	EPS
2024E	old	94.4	2.8	-0.03
	Δ	-5.2%	na%	na%
2025E	old	110.9	5.8	-0.02
	Δ	-6.1%	-80.3%	na%
2026E	old	124.6	9.5	0.10
	Δ	-8.2%	-63.9%	na%

Key share data

Number of shares: (in m pcs) 61.24
Book value per share: (in EUR) 1.14
Ø trading vol.: (12 months) 12,346

Major shareholders

Solar Future 35.5%
Solar Power to the People 32.2%
Tomala Investments 3.7%
Free Float 26.4%

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.

Photon Energy NV	2021	2022	2023	2024E	2025E	2026E
Sales	36.4	94.2	70.6	89.6	104.2	114.4
Growth yoy	28.7%	159.1%	-25.0%	26.8%	16.3%	9.8%
EBITDA	9.6	24.1	6.8	9.8	13.9	16.2
EBIT	-0.9	14.5	-5.2	-2.8	1.1	3.4
Net profit	2.0	4.3	-0.5	-6.1	-2.5	-10.9
Net debt (net cash)	89.1	127.3	166.8	176.2	173.7	173.0
Net debt/EBITDA	9.3x	5.3x	24.4x	18.0x	12.5x	10.7x
EPS reported	0.04	0.07	-0.01	-0.10	-0.04	-0.18
DPS	0.00	0.00	0.00	0.00	0.00	0.00
Dividend yield	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Gross profit margin	65.0%	53.1%	47.8%	73.0%	71.2%	72.6%
EBITDA margin	26.4%	25.5%	9.7%	11.0%	13.3%	14.2%
EBIT margin	-2.3%	15.4%	-7.4%	-3.1%	1.1%	3.0%
ROCE	-0.4%	6.6%	-2.0%	-1.0%	0.4%	1.2%
EV/Sales	4.4x	2.1x	3.4x	2.8x	2.4x	2.1x
EV/EBITDA	16.6x	8.2x	34.8x	25.2x	17.6x	15.1x
EV/EBIT	-187.2x	13.6x	-45.8x	-87.9x	215.5x	71.4x
PER	32.0x	16.4x	-153.4x	-11.6x	-27.7x	-6.5x

Source: Company data, mwb research

Currently, Photon Energy's average realized price in the Czech Republic is around EUR 640 per MWh and we estimate that the Czech Republic assets will contribute almost 40% of Photon Energy's proprietary portfolio revenues in 2024. A significant reduction in the realized price, as can be expected if the new measures are implemented by the Czech parliament, would be a major blow to Photon Energy. Not only would it reduce the high-margin recurring revenues from the Czech PV assets, but it could also require a write-down of the book value of these assets. On a positive note, these write-downs in our understanding would be excluded when considering the bond covenants, as regulatory changes are excluded. Photon Energy has filed a dispute with the Czech Republic, claiming that the state is in breach of certain investment protection provisions.

Adjusting estimates, rating / PT under review. We are adjusting our estimates to reflect the regulatory changes in Romania and Poland. Our adjusted FY24 estimates are in line with the updated company guidance of revenues of EUR 90m (previously EUR 90-100m) and EBITDA of EUR 10m (previously EUR 16-18m). We have not adjusted our estimates for potential changes in Czech regulation. Pending the outcome of the dispute with the Czech state, we have put our rating and target price under review.

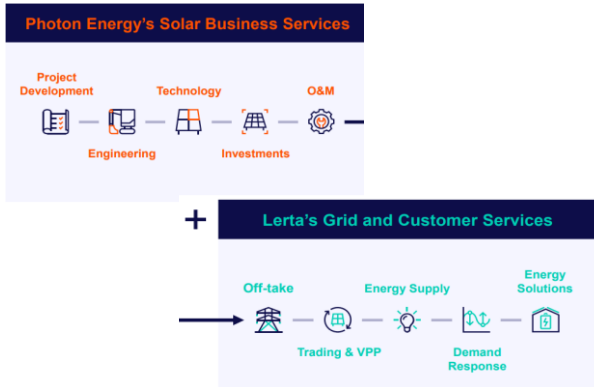
The following table displays the quarterly performance of **Photon Energy NV**:

P&L data	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024	Q3 2024
Sales	26.4	19.3	21.0	19.2	14.9	17.4	23.9	22.9
yoy growth in %	125.3%	111.0%	-9.8%	-45.7%	-43.6%	-9.9%	14.1%	18.9%
Gross profit	9.3	6.2	11.9	11.8	10.8	9.3	15.2	14.7
Gross margin in %	35.3%	32.4%	56.9%	61.6%	72.4%	53.5%	63.4%	64.5%
EBITDA	1.2	0.3	2.5	1.9	0.4	0.8	5.3	3.8
EBITDA margin in %	4.6%	1.7%	11.9%	10.0%	2.4%	4.5%	22.1%	16.6%
EBIT	-0.4	-1.6	0.1	-1.0	-4.1	-1.4	2.3	0.4
EBIT margin in %	-1.3%	-8.1%	0.5%	-5.4%	-27.3%	-8.2%	9.5%	1.7%
EBT	-2.4	-4.2	-2.8	-4.0	-4.0	-2.3	-2.6	-2.5
taxes paid	-1.4	0.0	0.5	-1.8	0.8	-1.0	0.2	0.5
tax rate in %	58.4%	0.0%	-17.0%	46.0%	-20.0%	43.0%	-6.2%	-20.7%
net profit	-3.8	-4.2	-3.3	-2.1	-4.8	-1.3	-2.8	-3.0
yoy growth in %	na%	na%	na%	na%	na%	na%	-14.8%	37.6%
EPS	-0.07	-0.08	-0.06	-0.04	-0.08	-0.02	-0.05	-0.05

Source: Company data; mwb research

Investment case in six charts

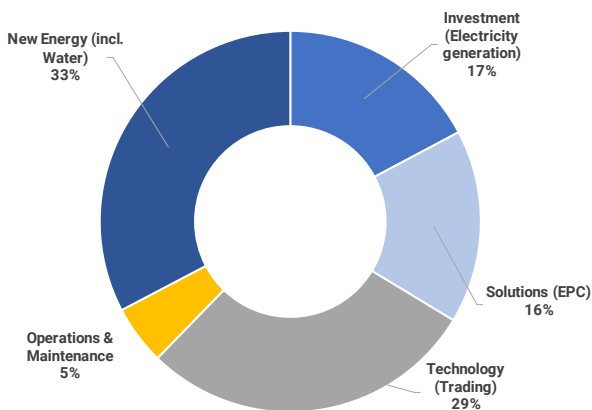
Business Model



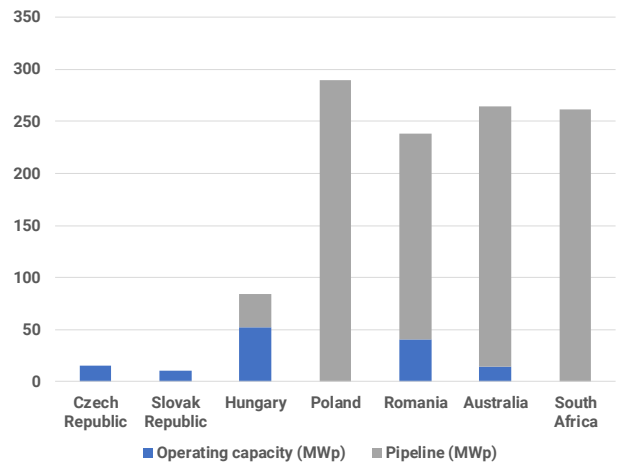
Geographical Presence



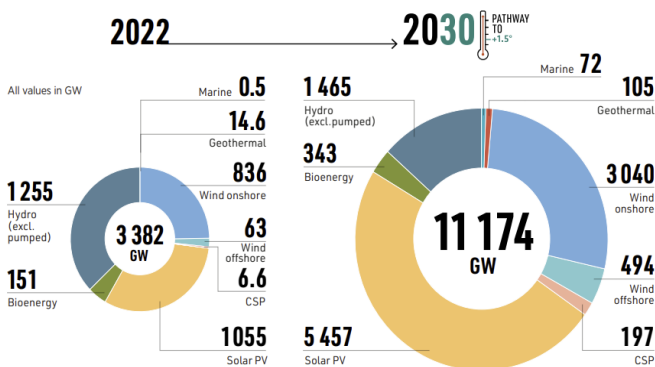
External Revenue Shares (2023)



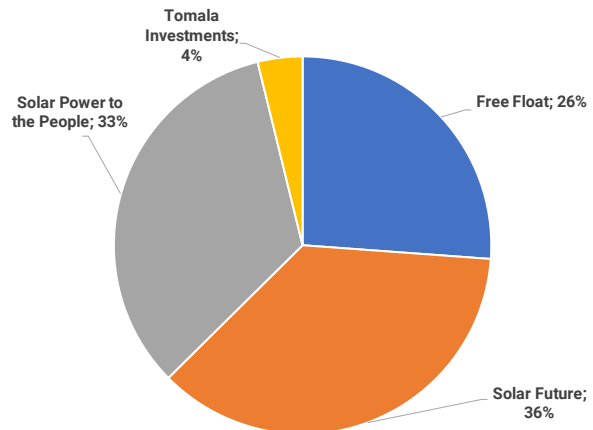
Capacity and Pipeline (H1 2024)



Fastest growing renewable energy



Major Shareholders



Source: Company data; mwb research; 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 -> 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
- 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
- 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 1.67 per share**:

Top-line growth: We expect Photon Energy NV to grow revenues at a CAGR of 8.1% between 2024E and 2031E. The long-term growth rate is set at 2.0%.

ROCE. Returns on capital are developing from -1.0% in 2024E to 6.3% in 2031E.

WACC. Starting point is a historical equity beta of 1.06. Unlevering and correcting for mean reversion yields an asset beta of 0.59. Combined with a risk-free rate of 2.0% and an equity risk premium of 6.0% this yields cost of equity of 10.1%. With pre-tax cost of borrowing at 7.5%, a tax rate of 35.0% and target debt/equity of 2.0 this results in a long-term WACC of 6.6%.

DCF (EURm) (except per share data and beta)	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	Terminal value
NOPAT	-2.1	0.9	2.6	3.0	3.4	3.8	4.6	12.3	
Depreciation & amortization	12.6	12.8	12.8	12.8	12.8	12.8	12.8	13.3	
Change in working capital	-4.3	-3.6	-2.6	-2.2	-2.2	-2.3	-2.5	-0.9	
Chg. in long-term provisions	0.6	0.2	1.4	1.2	1.2	1.3	1.4	0.4	
Capex	-12.1	1.7	0.0	0.0	0.0	0.0	-1.1	-13.0	
Cash flow	-5.3	12.0	14.2	14.8	15.2	15.5	15.1	12.1	266.2
Present value	-5.3	11.0	12.2	11.8	11.2	10.6	9.6	7.2	168.6
WACC	7.5%	7.5%	7.6%	7.6%	7.7%	7.7%	7.7%	7.6%	6.6%

DCF per share derived from	
Total present value	236.9
Mid-year adj. total present value	245.6
Net debt / cash at start of year	166.8
Financial assets	24.2
Provisions and off b/s debt	0.6
Equity value	102.4
No. of shares outstanding	61.2
Discounted cash flow / share upside/(downside)	1.67 45.4%

DCF avg. growth and earnings assumptions	
Planning horizon avg. revenue growth (2024E-2031E)	8.1%
Terminal value growth (2031E - infinity)	2.0%
Terminal year ROCE	6.3%
Terminal year WACC	6.6%

Terminal WACC derived from	
Cost of borrowing (before taxes)	7.5%
Long-term tax rate	35.0%
Equity beta	1.06
Unlevered beta (industry or company)	0.59
Target debt / equity	2.0
Relevered beta	1.36
Risk-free rate	2.0%
Equity risk premium	6.0%
Cost of equity	10.1%

Share price	1.15
--------------------	-------------

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%	0.3	0.4	0.5	0.7	0.8	2024E-2027E	12.5%
1.0%	0.6	0.8	1.0	1.2	1.5	2028E-2031E	16.3%
0.0%	1.1	1.4	1.7	2.0	2.5	terminal value	71.2%
-1.0%	1.9	2.2	2.7	3.4	4.3		
-2.0%	3.0	3.7	4.6	6.0	8.2		

Source: mwb research

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 -1.47 per share based on 2024E and EUR 0.64 per share on 2028E 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	2024E	2025E	2026E	2027E	2028E
EBITDA	9.8	13.9	16.2	16.8	17.3
- Maintenance capex	10.1	10.2	10.2	10.2	10.2
- Minorities	0.0	0.0	0.0	0.0	0.0
- tax expenses	-4.0	-2.9	-3.6	-3.9	-4.3
= Adjusted FCF	3.8	6.6	9.6	10.5	11.4
Actual Market Cap	70.4	70.4	70.4	70.4	70.4
+ Net debt (cash)	176.2	173.7	173.0	172.9	174.0
+ Pension provisions	0.7	0.8	0.9	1.0	1.0
+ Off B/S financing	0.0	0.0	0.0	0.0	0.0
- Financial assets	24.2	24.2	24.2	24.2	24.2
- Acc. dividend payments	0.0	0.0	0.0	0.0	0.0
<i>EV Reconciliations</i>	152.7	150.4	149.7	149.7	150.9
= Actual EV'	223.1	220.8	220.1	220.1	221.3
Adjusted FCF yield	1.7%	3.0%	4.4%	4.8%	5.2%
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%
Fair EV	62.5	109.5	160.0	175.2	190.0
- <i>EV Reconciliations</i>	152.7	150.4	149.7	149.7	150.9
Fair Market Cap	-90.2	-40.8	10.3	25.5	39.1
No. of shares (million)	61.2	61.2	61.2	61.2	61.2
Fair value per share in EUR	-1.47	-0.67	0.17	0.42	0.64
Premium (-) / discount (+)	-228.0%	-158.0%	-85.4%	-63.8%	-44.5%

Sensitivity analysis FV						
	4.0%	-1.0	0.2	1.5	1.8	2.2
Adjusted hurdle rate	5.0%	-1.3	-0.3	0.7	1.0	1.3
	6.0%	-1.5	-0.7	0.2	0.4	0.6
	7.0%	-1.6	-0.9	-0.2	0.0	0.2
	8.0%	-1.7	-1.1	-0.5	-0.3	-0.1

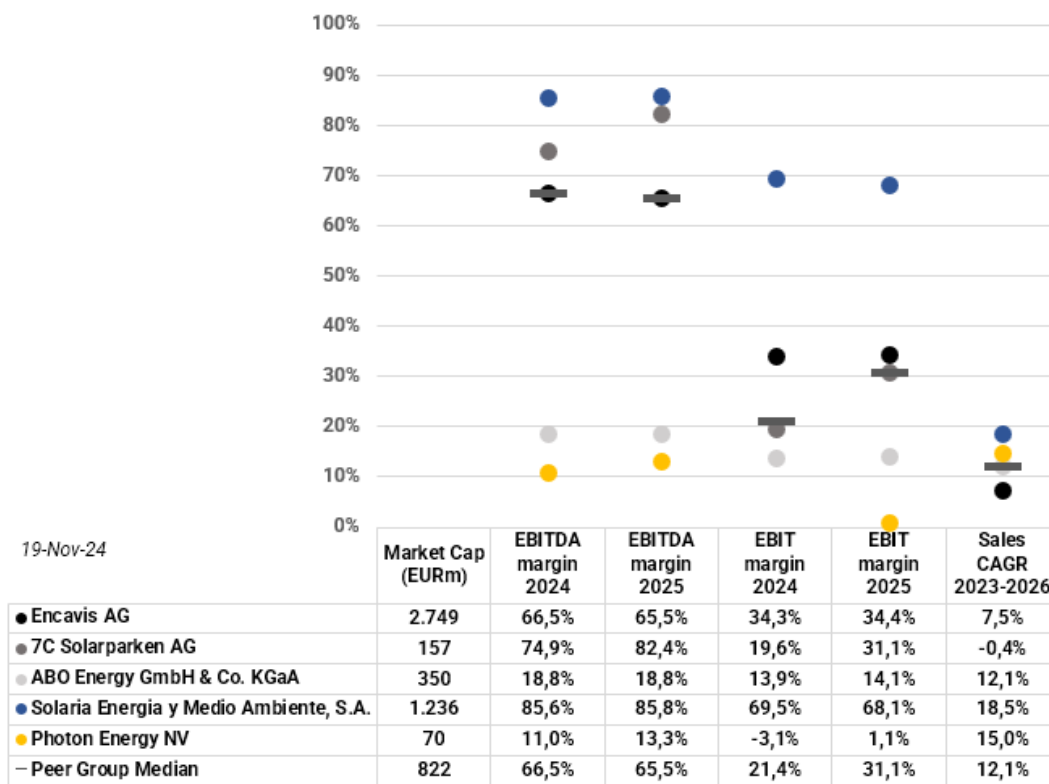
Source: Company data; mwb research

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 19 November 2024 the median market cap of the peer group was EUR 821.7m, compared to EUR 70.4m 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

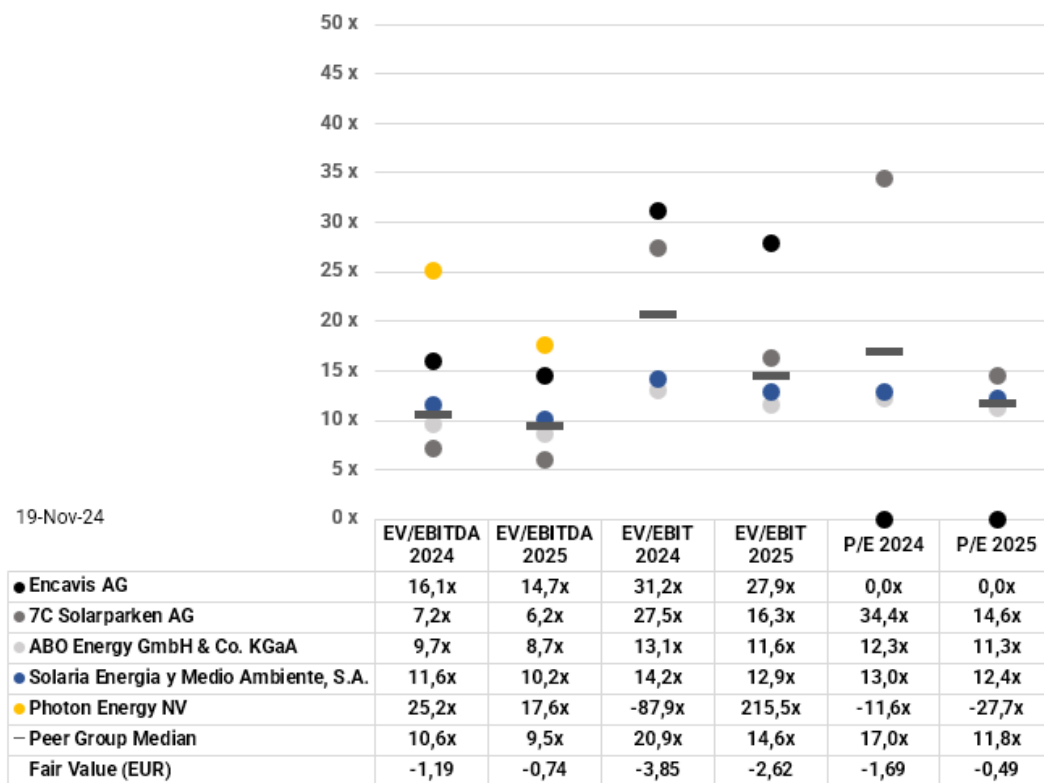


Source: FactSet, mwb research

Comparable company analysis operates under the assumption that similar companies will have similar valuation multiples. We use the following multiples: EV/EBITDA 2024, EV/EBITDA 2025, EV/EBIT 2024, EV/EBIT 2025, P/E 2024 and P/E 2025.

Applying these to Photon Energy NV results in a range of fair values from EUR 0.01 to EUR -0.49.

Peer Group – Multiples and valuation

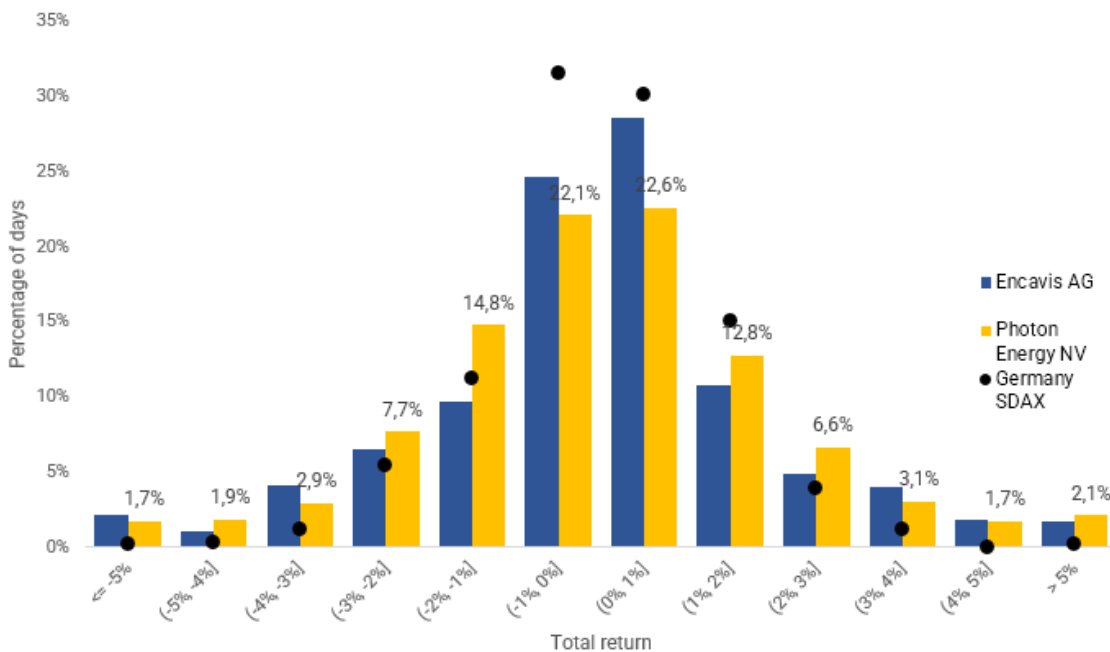


Source: FactSet, mwb research

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 Germany SDAX. 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 02/09/2022 with a share price decline of -13.1%. The best day was 07/09/2022 when the share price increased by 14.1%.

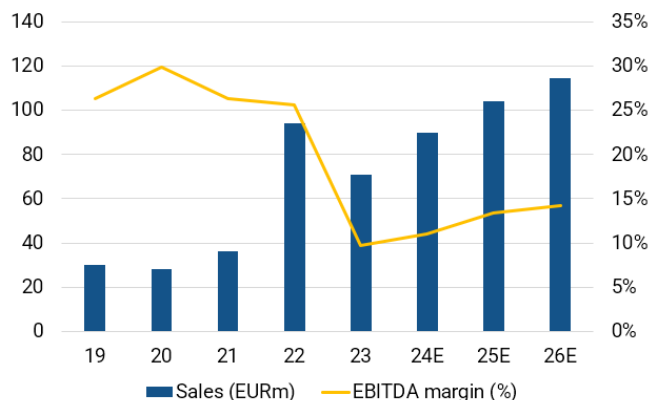
Risk – Daily Returns Distribution (trailing 3 years)



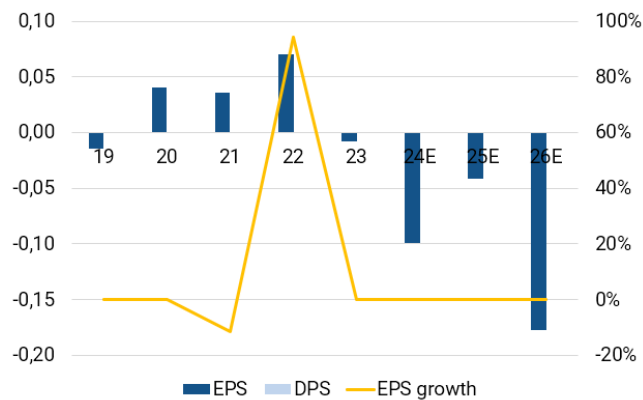
Source: FactSet, mwb research

Financials in six charts

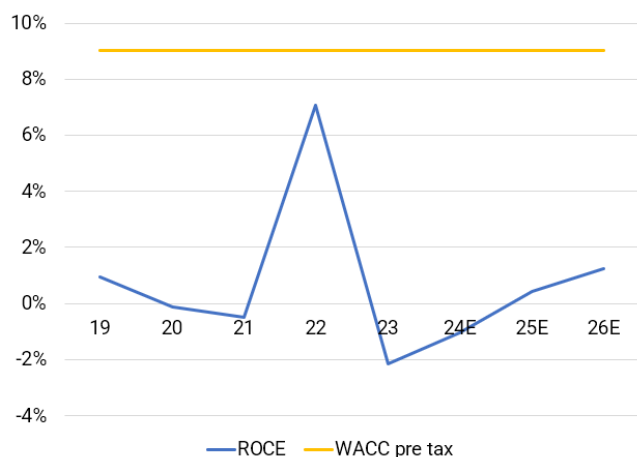
Sales vs. EBITDA margin development



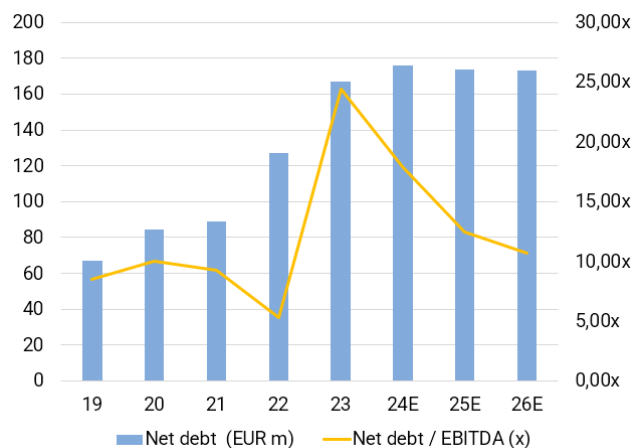
EPS, DPS in EUR & yoy EPS growth



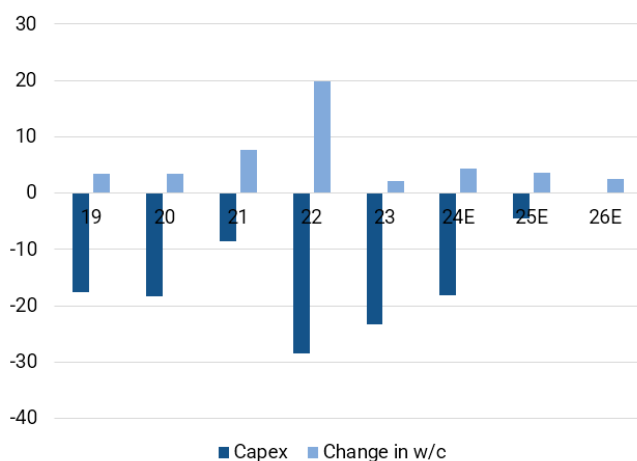
ROCE vs. WACC (pre tax)



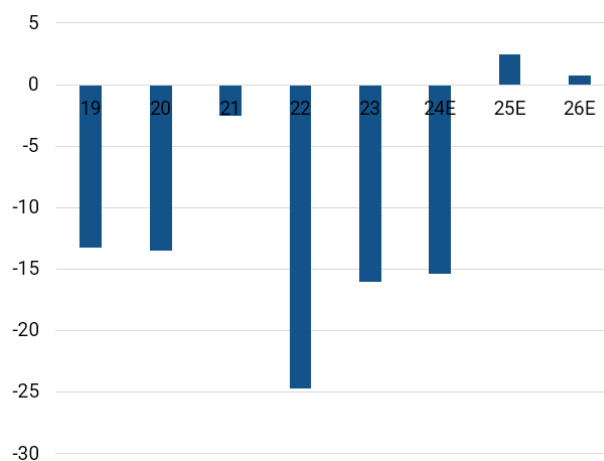
Net debt and net debt/EBITDA



Capex & chgn in w/c requirements in EURm



Free Cash Flow in EURm



Source: Company data; mwb research

Financials

Profit and loss (EURm)	2021	2022	2023	2024E	2025E	2026E
Net sales	36.4	94.2	70.6	89.6	104.2	114.4
Sales growth	28.7%	159.1%	-25.0%	26.8%	16.3%	9.8%
Change in finished goods and work-in-process	0.0	0.0	0.0	0.0	0.0	0.0
Total sales	36.4	94.2	70.6	89.6	104.2	114.4
Material expenses	12.7	44.1	36.9	24.2	30.0	31.3
Gross profit	23.6	50.1	33.8	65.4	74.2	83.1
Other operating income	0.6	0.6	4.1	5.1	5.9	6.5
Personnel expenses	6.7	9.5	18.5	42.8	47.5	58.5
Other operating expenses	7.7	17.0	12.5	17.9	18.8	14.9
EBITDA	9.6	24.1	6.8	9.8	13.9	16.2
Depreciation	10.7	9.0	12.0	12.6	12.8	12.8
EBITA	-1.1	15.1	-5.2	-2.8	1.1	3.4
Amortisation of goodwill and intangible assets	-0.2	0.6	0.0	0.0	0.0	0.0
EBIT	-0.9	14.5	-5.2	-2.8	1.1	3.4
Financial result	-5.2	-8.3	-11.1	-13.4	-12.7	-17.9
Recurring pretax income from continuing operations	-6.1	6.2	-16.3	-16.2	-11.5	-14.5
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0	0.0
Earnings before taxes	-6.1	6.2	-16.3	-16.2	-11.5	-14.5
Taxes	0.5	3.5	-0.6	-4.0	-2.9	-3.6
Net income from continuing operations	-6.6	2.8	-15.8	-12.1	-8.6	-10.9
Result from discontinued operations (net of tax)	8.5	1.5	15.3	6.0	6.1	0.0
Net income	2.0	4.3	-0.5	-6.1	-2.5	-10.9
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0
Net profit (reported)	2.0	4.3	-0.5	-6.1	-2.5	-10.9
Average number of shares	54.36	61.24	61.24	61.24	61.24	61.24
EPS reported	0.04	0.07	-0.01	-0.10	-0.04	-0.18

Profit and loss (common size)	2021	2022	2023	2024E	2025E	2026E
Net sales	100%	100%	100%	100%	100%	100%
Change in finished goods and work-in-process	0%	0%	0%	0%	0%	0%
Total sales	100%	100%	100%	100%	100%	100%
Material expenses	35%	47%	52%	27%	29%	27%
Gross profit	65%	53%	48%	73%	71%	73%
Other operating income	2%	1%	6%	6%	6%	6%
Personnel expenses	19%	10%	26%	48%	46%	51%
Other operating expenses	21%	18%	18%	20%	18%	13%
EBITDA	26%	26%	10%	11%	13%	14%
Depreciation	29%	10%	17%	14%	12%	11%
EBITA	-3%	16%	-7%	-3%	1%	3%
Amortisation of goodwill and intangible assets	-1%	1%	0%	0%	0%	0%
EBIT	-2%	15%	-7%	-3%	1%	3%
Financial result	-14%	-9%	-16%	-15%	-12%	-16%
Recurring pretax income from continuing operations	-17%	7%	-23%	-18%	-11%	-13%
Extraordinary income/loss	0%	0%	0%	0%	0%	0%
Earnings before taxes	-17%	7%	-23%	-18%	-11%	-13%
Taxes	1%	4%	-1%	-5%	-3%	-3%
Net income from continuing operations	-18%	3%	-22%	-14%	-8%	-10%
Result from discontinued operations (net of tax)	23%	2%	22%	7%	6%	0%
Net income	5%	5%	-1%	-7%	-2%	-10%
Minority interest	0%	0%	0%	0%	0%	0%
Net profit (reported)	5%	5%	-1%	-7%	-2%	-10%

Source: Company data; mwb research

Balance sheet (EURm)	2021	2022	2023	2024E	2025E	2026E
Intangible assets (exl. Goodwill)	0.8	13.0	8.1	8.1	8.1	8.1
Goodwill	0.0	0.0	15.3	15.3	15.3	15.3
Property, plant and equipment	127.5	145.3	177.5	183.0	174.7	161.9
Financial assets	14.1	12.8	24.2	24.2	24.2	24.2
FIXED ASSETS	142.5	171.2	225.0	230.5	222.2	209.4
Inventories	2.2	15.8	14.1	5.3	6.6	6.9
Accounts receivable	9.1	27.8	17.0	22.1	25.7	28.2
Other current assets	2.9	3.2	7.1	7.1	7.1	7.1
Liquid assets	39.4	21.4	13.0	13.8	6.3	37.0
Deferred taxes	0.3	0.0	0.0	0.0	0.0	0.0
Deferred charges and prepaid expenses	0.3	0.9	1.3	0.7	0.8	0.9
CURRENT ASSETS	54.2	69.1	52.4	49.0	46.5	80.1
TOTAL ASSETS	196.6	240.2	277.4	279.5	268.7	289.5
SHAREHOLDERS EQUITY	51.7	60.7	69.8	69.7	67.2	56.3
MINORITY INTEREST	-0.1	-0.2	-0.3	-0.3	-0.3	-0.3
Long-term debt	100.0	138.2	164.8	175.0	165.0	195.0
Provisions for pensions and similar obligations	0.0	0.0	0.6	0.7	0.8	0.9
Other provisions	11.1	12.0	13.0	13.4	13.5	14.9
Non-current liabilities	111.1	150.2	178.3	189.1	179.4	210.8
short-term liabilities to banks	28.5	10.4	15.0	15.0	15.0	15.0
Accounts payable	2.3	12.4	14.6	6.0	7.4	7.7
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)	3.2	4.4	0.0	0.0	0.0	0.0
Deferred taxes	0.0	2.3	0.0	0.0	0.0	0.0
Deferred income	0.0	0.0	0.0	0.0	0.0	0.0
Current liabilities	34.0	29.5	29.6	21.0	22.4	22.7
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	196.6	240.2	277.4	279.5	268.7	289.5

Balance sheet (common size)	2021	2022	2023	2024E	2025E	2026E
Intangible assets (excl. Goodwill)	0%	5%	3%	3%	3%	3%
Goodwill	0%	0%	6%	5%	6%	5%
Property, plant and equipment	65%	60%	64%	65%	65%	56%
Financial assets	7%	5%	9%	9%	9%	8%
FIXED ASSETS	72%	71%	81%	82%	83%	72%
Inventories	1%	7%	5%	2%	2%	2%
Accounts receivable	5%	12%	6%	8%	10%	10%
Other current assets	1%	1%	3%	3%	3%	2%
Liquid assets	20%	9%	5%	5%	2%	13%
Deferred taxes	0%	0%	0%	0%	0%	0%
Deferred charges and prepaid expenses	0%	0%	0%	0%	0%	0%
CURRENT ASSETS	28%	29%	19%	18%	17%	28%
TOTAL ASSETS	100%	100%	100%	100%	100%	100%
SHAREHOLDERS EQUITY	26%	25%	25%	25%	25%	19%
MINORITY INTEREST	-0%	-0%	-0%	-0%	-0%	-0%
Long-term debt	51%	58%	59%	63%	61%	67%
Provisions for pensions and similar obligations	0%	0%	0%	0%	0%	0%
Other provisions	6%	5%	5%	5%	5%	5%
Non-current liabilities	57%	63%	64%	68%	67%	73%
short-term liabilities to banks	14%	4%	5%	5%	6%	5%
Accounts payable	1%	5%	5%	2%	3%	3%
Advance payments received on orders	0%	0%	0%	0%	0%	0%
Other liabilities (incl. from lease and rental contracts)	2%	2%	0%	0%	0%	0%
Deferred taxes	0%	1%	0%	0%	0%	0%
Deferred income	0%	0%	0%	0%	0%	0%
Current liabilities	17%	12%	11%	8%	8%	8%
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	100%	100%	100%	100%	100%	100%

Source: Company data; mwb research

Cash flow statement (EURm)	2021	2022	2023	2024E	2025E	2026E
Net profit/loss	-5.9	6.2	-16.3	-6.1	-2.5	-10.9
Depreciation of fixed assets (incl. leases)	10.7	8.9	11.9	12.6	12.8	12.8
Amortisation of goodwill	0.0	0.0	0.0	0.0	0.0	0.0
Amortisation of intangible assets	0.0	0.7	0.0	0.0	0.0	0.0
Others	9.0	7.8	13.7	0.6	0.2	1.4
Cash flow from operations before changes in w/c	13.7	23.6	9.3	7.1	10.5	3.3
Increase/decrease in inventory	-1.2	-13.4	5.9	8.8	-1.3	-0.3
Increase/decrease in accounts receivable	-1.6	-10.9	1.5	-5.1	-3.6	-2.5
Increase/decrease in accounts payable	-2.4	5.0	-4.0	-8.6	1.4	0.3
Increase/decrease in other w/c positions	-2.5	-0.5	-5.4	0.6	-0.1	-0.1
Increase/decrease in working capital	-7.6	-19.9	-2.1	-4.3	-3.6	-2.6
Cash flow from operating activities	6.1	3.7	7.2	2.8	6.9	0.7
CAPEX	-8.6	-28.4	-23.3	-18.1	-4.4	0.0
Payments for acquisitions	0.0	-6.2	-3.4	0.0	0.0	0.0
Financial investments	-5.6	0.4	0.0	0.0	0.0	0.0
Income from asset disposals	0.0	0.0	0.0	6.0	0.0	0.0
Cash flow from investing activities	-14.2	-34.3	-26.7	-12.2	-4.4	0.0
Cash flow before financing	-8.1	-30.6	-19.5	-9.4	2.5	0.7
Increase/decrease in debt position	29.8	18.0	14.1	10.2	-10.0	30.0
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	-6.9	-8.7	0.0	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
Cash flow from financing activities	22.9	9.3	14.1	10.2	-10.0	30.0
Increase/decrease in liquid assets	14.8	-21.2	-5.4	0.8	-7.5	30.7
Liquid assets at end of period	32.5	11.3	5.8	6.7	-0.9	29.9

Source: Company data; mwb research

Regional sales split (EURm)	2021	2022	2023	2024E	2025E	2026E
Domestic	0.0	0.0	0.0	0.0	0.0	0.0
Europe (ex domestic)	29.3	89.1	68.9	87.4	101.7	111.6
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	7.1	5.1	1.7	2.2	2.5	2.8
Total sales	36.4	94.2	70.6	89.6	104.2	114.4

Regional sales split (common size)	2021	2022	2023	2024E	2025E	2026E
Domestic	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
Europe (ex domestic)	80.6%	94.6%	97.6%	97.6%	97.6%	97.6%
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	19.4%	5.4%	2.4%	2.4%	2.4%	2.4%
Total sales	100%	100%	100%	100%	100%	100%

Source: Company data; mwb research

Ratios	2021	2022	2023	2024E	2025E	2026E
Per share data						
Earnings per share reported	0.04	0.07	-0.01	-0.10	-0.04	-0.18
Cash flow per share	0.11	0.06	0.12	-0.12	-0.05	-0.15
Book value per share	0.95	0.99	1.14	1.14	1.10	0.92
Dividend per share	0.00	0.00	0.00	0.00	0.00	0.00
Valuation						
P/E	32.0x	16.4x	-153.4x	-11.6x	-27.7x	-6.5x
P/CF	10.2x	18.9x	9.8x	-9.6x	-21.2x	-7.4x
P/BV	1.2x	1.2x	1.0x	1.0x	1.0x	1.3x
Dividend yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield (%)	9.8%	5.3%	10.2%	-10.4%	-4.7%	-13.5%
EV/Sales	4.4x	2.1x	3.4x	2.8x	2.4x	2.1x
EV/EBITDA	16.6x	8.2x	34.8x	25.2x	17.6x	15.1x
EV/EBIT	-187.2x	13.6x	-45.8x	-87.9x	215.5x	71.4x
Income statement (EURm)						
Sales	36.4	94.2	70.6	89.6	104.2	114.4
yoy chg in %	28.7%	159.1%	-25.0%	26.8%	16.3%	9.8%
Gross profit	23.6	50.1	33.8	65.4	74.2	83.1
Gross margin in %	65.0%	53.1%	47.8%	73.0%	71.2%	72.6%
EBITDA	9.6	24.1	6.8	9.8	13.9	16.2
EBITDA margin in %	26.4%	25.5%	9.7%	11.0%	13.3%	14.2%
EBIT	-0.9	14.5	-5.2	-2.8	1.1	3.4
EBIT margin in %	-2.3%	15.4%	-7.4%	-3.1%	1.1%	3.0%
Net profit	2.0	4.3	-0.5	-6.1	-2.5	-10.9
Cash flow statement (EURm)						
CF from operations	6.1	3.7	7.2	2.8	6.9	0.7
Capex	-8.6	-28.4	-23.3	-18.1	-4.4	0.0
Maintenance Capex	0.0	0.0	0.0	10.1	10.2	10.2
Free cash flow	-2.5	-24.7	-16.1	-15.4	2.5	0.7
Balance sheet (EURm)						
Intangible assets	0.8	13.0	23.3	23.3	23.3	23.3
Tangible assets	127.5	145.3	177.5	183.0	174.7	161.9
Shareholders' equity	51.7	60.7	69.8	69.7	67.2	56.3
Pension provisions	0.0	0.0	0.6	0.7	0.8	0.9
Liabilities and provisions	139.6	160.6	193.4	204.2	194.4	225.8
Net financial debt	89.1	127.3	166.8	176.2	173.7	173.0
w/c requirements	9.0	31.2	16.5	21.4	24.9	27.4
Ratios						
ROE	3.8%	7.0%	-0.7%	-8.7%	-3.8%	-19.3%
ROCE	-0.4%	6.6%	-2.0%	-1.0%	0.4%	1.2%
Net gearing	172.4%	209.6%	239.1%	252.8%	258.7%	307.4%
Net debt / EBITDA	9.3x	5.3x	24.4x	18.0x	12.5x	10.7x

Source: Company data; mwb research

Conflicts of interest

Disclosures regarding research publications of mwb research 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 and 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 mwb research 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 terms 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 mwb research 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 mwb research 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 mwb research AG. Reproduction of this document, in whole or in part, is not permitted without prior permission mwb research AG. All rights reserved. Under no circumstances shall mwb research 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 mwb research 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 mwb research 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.mwb.-research.com>.

mwb research 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 mwb research 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 mwb research AG. The opinions and estimates in this research report are subject to change without notice. It is within the discretion of mwb research 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
19-Nov-24 11:34:15

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. mwb research AG has checked the information for plausibility but not for accuracy or completeness.

8. Competent Supervisory Authority mwb research 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.mwb.-research.com>.

Contacts

mwb research AG
Mittelweg 142
20148 Hamburg
Germany

Tel.: +49 40 309 293-52
Email.: contact@mwb-research.com
Website: www.mwb-research.com
Research: www.research-hub.de

Research

HARALD HOF
Senior Analyst
Tel: +49 40 309 293-53
E-Mail: h.hof@mwb-research.com

LEON MÜHLENBRUCH
Analyst
Tel: +49 40 309 293-57
E-Mail: l.muehlenbruch@mwb-research.com

ABED JARAD
Junior Analyst
Tel: +49 40 309 293-54
E-Mail: a.jarad@mwb-research.com

JENS-PETER RIECK
Junior Analyst
Tel: +49 40 309 293-54
E-Mail: jp.riek@mwb-research.com

THOMAS WISSLER
Senior Analyst
Tel: +49 40 309 293-58
E-Mail: t.wissler@mwb-research.com

DR. OLIVER WOJAHN, CFA
Senior Analyst
Tel: +49 40 309 293-55
E-Mail: o.wojahn@mwb-research.com

ALEXANDER ZIENKOWICZ
Senior Analyst
Tel: +49 40 309 293-56
E-Mail: a.zienkovicz@mwb-research.com

Sales

HOLGER NASS
Head of Sales
Tel: +49 40 309 293-52
E-Mail: h.nass@mwb-research.com

Team Assistant

HANNAH GABERT
Team Assistant
Tel: +49 40 309 293-52
E-Mail: h.gabert@mwb-research.com

mwb fairtrade
Wertpapierhandelsbank AG
Rottenbucher Straße 28
82166 Gräfelfing

Tel: +49 89 85852-0
Fax: +49 89 85852-505
Website: www.mwbfairtrade.com
E-Mail: info@mwbfairtrade.com

Sales / Designated Sponsoring / Corporate Finance

ALEXANDER DEUSS
Institutional Sales
Tel: +49 40 36 0995-22
E-Mail: adeuss@mwbfairtrade.com

SASCHA GUENON
Head of Designated Sponsoring
Tel: +49 40 360 995-23
E-Mail: sguenon@mwbfairtrade.com

JAN NEYNABER
Institutional Sales
Tel: +49 69 1387-1255
E-Mail: jneynaber@mwbfairtrade.com

DIRK WEYERHÄUSER
Corporate Finance
Tel: +49 69 1387-1250
E-Mail: dweyerhaeuser@mwbfairtrade.com

Locations

HAMBURG (Research)
Mittelweg 142
20148 Hamburg
+49 40 309 293-52

HAMBURG (Corporates & Markets)
Kleine Johannisstraße 4
20457 Hamburg
+49 40 360 995-0

FRANKFURT A.M.
Unterlindau 29
60323 Frankfurt am Main
+49 40 360 995-22

MUNICH
Rottenbucher Str. 28
82166 Gräfelfing
+49 89-85852-0

BERLIN
Kurfürstendamm 151
10709 Berlin

HANNOVER
An der Börse 2
30159 Hannover

Our research can be found at

ResearchHub
Bloomberg
FactSet
Thomson Reuters / Refinitiv
CapitalIQ

www.research-hub.de
www.bloomberg.com
www.factset.com
www.refinitiv.com
www.capitaliq.com