

Photon Energy NV

Netherlands | Renewables | MCap EUR 96.8m

21 August 2024

UPDATE



Q2 solid; FX charges burden equity; adj. est./PT, Spec. BUY

What's it all about?

Photon Energy's Q2 report showed a 14% yoy increase in revenues to EUR 23.9m, driven by a strong performance in power generation, engineering services and the capacity market, but held back by a component trading market still characterized by oversupply and price pressure. EBITDA improved significantly due to a favorable mix effect, with the margin almost doubling yoy to 22%. The project pipeline underwent significant changes, with Australian projects being scaled back and promising projects in South Africa being added. The adjusted equity ratio of 25.6% was close to the 25% required by the covenants of the green bond, due to FX charges from a strengthening EUR. Management confirmed its FY24 guidance and believes that the continued positive development of profitability in H2, coupled with the commissioning of the remaining capacity in Romania, will ensure that the company remains above the critical threshold. The commissioning of the Romanian capacity alone could lead to OCI of c. EUR 3m, adding c. 90bp to the adjusted equity ratio, thus reducing the risk of the ratio falling below 25%. We adjust our estimates and arrive at a new PT of EUR 2.50 and a Spec. BUY rating. Spec. BUY (BUY)

Target price Current price Up/downside EUR 2.50 (3.05) EUR 1.58 58.2%



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mwb-research.com

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Photon Energy NV

Netherlands | Renewables | MCap EUR 96.8m | EV EUR 264.1m

Spec. BUY (BUY)	Target price	EUR 2.50 (3.05)	MAIN AUTHOR
	Current price	EUR 1.58	Dr. Oliver Wojahn, CFA
	Up/downside	58.2%	o.wojahn@mwb-research.com
	1		+49 40 309 293-55

Q2 solid; FX charges burden equity; adj. est./PT, Spec. BUY

Q2 revenues up 14%. Photon Energy has published its H1 / Q2 report. Q2 revenues increased by approx. 14% yoy to EUR 23.9m. The growth was driven by increased contributions from Investments (power generation, +18% yoy), Engineering (EPC services, +189%, driven by the completion of projects in New Zealand) and New Energy (capacity markets, energy trading, demand side response, +67%). Technology (component trading) remained a drag, up sequentially but still down 66% yoy as oversupply and pricing pressures continue to characterize the market.

Further improvement in EBITDA. EBITDA of EUR 5.3m in the second quarter represents a margin of 22%, almost double that of the previous year. The margin benefited from a positive mix effect due to the reduction of low margin trading activities and the increasing weight of the higher margin Investment and New Energy activities. The Engineering segment turned negative in the second quarter, but this was expected as it was a timing issue in cost recognition. Profitability here is expected to improve in H2.

Australia scaled down, South Africa added to project pipeline. A major revision in the project pipeline was the reduction of the Australian projects by 415 MWp due to transmission and water supply constraints and investment considerations. At the same time, the South African market was added with 262 MWp in the feasibility phase. This includes a 12 MWp PPA with the City of Cape Town (in the tender process) and 10 square kilometers of land secured with the aim of developing a 250 MWp Raygen power plant with 1.8 GWh of thermal hydro storage. In theory, Raygen technology should be an ideal solution to South Africa's problems: ample storage with power on demand addresses the problems of rolling blackouts and load shedding, and solar irradiance in South Africa is ideal for the Raygen technology.

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Photon Energy NV	2021	2022	2023	2024E	2025E	2026E
Sales	36.4	94.2	70.6	94.4	113.6	127.7
Growth yoy	28.7%	159.1%	-25.0%	33.7%	20.3%	12.4%
EBITDA	9.6	24.1	6.8	15.4	20.6	26.3
EBIT	-0.9	14.5	-5.2	2.8	6.6	10.8
Net profit	2.0	4.3	-0.5	-1.9	3.7	5.5
Net debt (net cash)	89.1	127.3	166.8	178.4	204.7	233.0
Net debt/EBITDA	9.3x	5.3x	24.4x	11.6x	9.9x	8.9x
EPS reported	0.04	0.07	-0.01	-0.03	0.06	0.09
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%	74.4%	73.6%	75.5%
EBITDA margin	26.4%	25.5%	9.7%	16.3%	18.1%	20.6%
EBIT margin	-2.3%	15.4%	-7.4%	3.0%	5.9%	8.4%
ROCE	-0.4%	6.6%	-2.0%	1.0%	2.2%	3.3%
EV/Sales	5.1x	2.4x	3.7x	2.9x	2.7x	2.6x
EV/EBITDA	19.4x	9.3x	38.7x	17.9x	14.7x	12.6x
EV/EBIT	-218.1x	15.4x	-50.8x	98.2x	45.5x	30.8x
PER	43.9x	22.6x	-210.8x	-52.1x	26.1x	17.5x

Source: Company data, mwb research



Source: Company data, mwb research

High/low 52 weeks Price/Book Ratio	2.40 / 1.53 1.4x
Ticker / Symbols	
ISIN	NL0010391108
WKN	A1T9KW
Bloomberg	P7V:GR

Changes in estimates

		Sales	EBIT	EPS
2024E	old	95.1	3.4	-0.02
	∆	-0.7%	-16.7%	na%
2025E	old	114.5	7.5	0.07
	∆	-0.8%	-10.9%	-14.1%
2026E	old	128.9	11.8	0.10
	∆	-1.0%	-9.0%	-12.6%

Key share data

Number of shares: (in m pcs)	61.24
Book value per share: (in EUR)	1.14
Ø trading vol.: (12 months)	11,859

Major shareholders

Solar Future	35.5%
Solar Power to the People	32.8%
Tomala Investments	3.7%
Free Float	25.5%

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.





Equity buffer needs to be watched. Photon Energy generated a positive operating cash flow of EUR 1.9m in Q2 (Q1 24: 4.7m, Q2 23: EUR -6.9m), resulting in a negative FCF of EUR 0.6m. Financial cash flow was positive at EUR 4.0m, supported by new financing activities, including a EUR 15m project financing agreement with the European Bank for Reconstruction and Development. The cash balance of EUR 8.6m looks adequate. The adjusted equity ratio declined from 27.7% in Q1 to 25.6% in Q2, close to the 25.0% threshold required to comply with the company's bond covenants. At the current level of debt, Photon Energy can absorb another c. EUR 2m of losses against equity before breaching the bond covenants, which will next be tested with the audited FY24 consolidated financial statements. In the event of a breach, bondholders could demand repayment of the principal amount of the bond (EUR 77.5m) plus accrued interest. Photon Energy's management believes that the continued positive development of profitability in H2, coupled with the commissioning of the remaining 10.7 MWp capacity in Romania, will ensure that the company remains above the critical threshold. The commissioning of the Romanian capacity alone could result in OCI of c. EUR 3m (mwb est.), which would add c. 90bp to the adjusted equity ratio, thus reducing the risk that external events, such as a further strengthening of the EUR or a further fall in energy prices, could push the ratio below 25.0%.

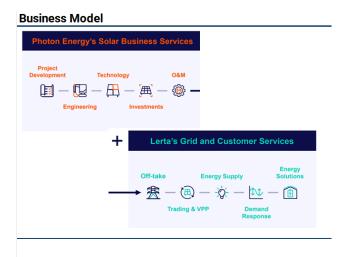
Guidance confirmed, adjusting est. / PT, Spec. BUY. Management confirmed the FY24 guidance of EUR 90-100m revenues and EUR 16-18m EBITDA, but warned that unforeseen developments could impact the ability to achieve these targets. Overall, the company deserves credit for building a more resilient business model in the face of the perfect PV storm of rising interest rates, falling electricity and component prices and, most recently, unfavorable currency movements. The business has been operationally de-risked by increasing the proportion of power sold under a feed-in tariff and the proportion of more stable DSR and EPC revenues, while reducing exposure to the merchant model and volatile component trading. With adjusted estimates, we arrive at a new price target of EUR 2.50 (old: EUR 3.05), which still offers significant upside for investors. We rate the stock as a Spec. BUY.

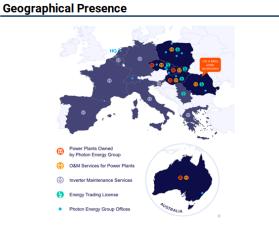
The following table displays the quarterly performance of **Photon Energy NV**:

P&L data	Q3 2022	Q4 2022	Q1 2023	Q2 2023	Q3 2023	Q4 2023	Q1 2024	Q2 2024
Sales	35.4	26.4	19.3	21.0	19.2	14.9	17.4	23.9
yoy growth in %	247.2%	125.3%	111.0%	-9.8%	-45.7%	-43.6%	-9.9%	14.1%
Gross profit	20.3	9.3	6.2	11.9	11.8	10.8	9.3	15.2
Gross margin in %	57.4%	35.3%	32.4%	56.9%	61.6%	72.4%	53.5%	63.4%
EBITDA	12.7	1.2	0.3	2.5	1.9	0.4	0.8	5.3
EBITDA margin in %	35.9%	4.6%	1.7%	11.9%	10.0%	2.4%	4.5%	22.1%
EBIT	9.7	-0.4	-1.6	0.1	-1.0	-4.1	-1.4	2.3
EBIT margin in %	27.5%	-1.3%	-8.1%	0.5%	-5.4%	-27.3%	-8.2%	9.5%
EBT	7.3	-2.4	-4.2	-2.8	-4.0	-4.0	-2.3	-2.6
taxes paid	1.3	-1.4	0.0	0.5	-1.8	0.8	-1.0	0.2
tax rate in %	18.1%	58.4%	0.0%	-17.0%	46.0%	-20.0%	43.0%	-6.2%
net profit	6.0	-3.8	-4.2	-3.3	-2.1	-4.8	-1.3	-2.8
yoy growth in %	na%	-14.8%						
EPS	0.11	-0.07	-0.08	-0.06	-0.04	-0.08	-0.02	-0.05

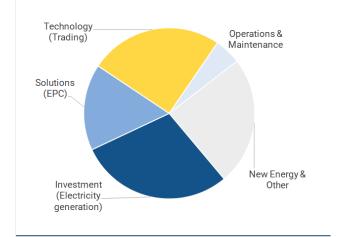


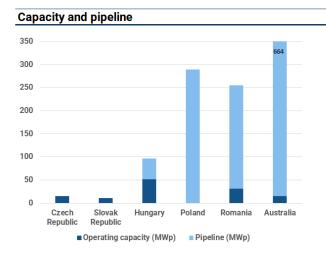
Investment case in six charts



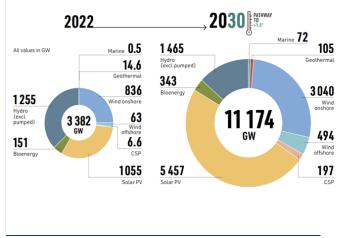


External Revenue Shares (2023)

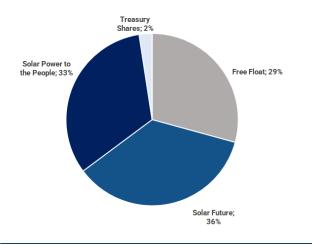




Fastest growing renewable energy



Major Shareholders



Source: Company data; mwb research; IRENA

Research**Hub**



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 2.54 per share:

Top-line growth: We expect Photon Energy NV to grow revenues at a CAGR of 9.5% 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 7.9% in 2031E.

WACC. Starting point is a historical equity beta of 1.06. Unleverering and correcting for mean reversion yields an asset beta of 0.64. Combined with a risk-free rate of 2.0% and an equity risk premium of 6.0% this yields cost of equity of 9.6%. With pretax 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 6.8%.

DCF (EURm) (except per share data and beta)	2024E	2025E	2026E	2027E	2028E	2029E	2030E	2031E	Terminal value
NOPAT	2.1	5.0	8.1	11.5	13.9	16.6	19.6	21.7	
Depreciation & amortization	12.6	14.0	15.5	16.9	18.3	19.1	19.2	19.7	
Change in working capital	-5.6	-4.7	-3.6	-3.3	-2.9	-2.8	-2.7	-0.9	
Chg. in long-term provisions	1.4	0.7	1.9	1.8	1.6	1.5	1.5	0.5	
Capex	-12.1	-29.9	-35.2	-35.3	-34.6	-20.3	-19.2	-19.0	
Cash flow	-1.6	-14.9	-13.2	-8.3	-3.7	14.1	18.4	22.0	469.8
Present value	-1.6	-13.5	-11.1	-6.5	-2.6	9.4	11.4	12.7	290.0
WACC	7.6%	7.7%	7.7%	7.8%	7.8%	7.8%	7.8%	7.7%	6.8%

DCF per share derived from	
Total present value	288.2
Mid-year adj. total present value	299.1
Net debt / cash at start of year	166.8
Financial assets	24.2
Provisions and off b/s debt	0.6
Equity value	155.8
No. of shares outstanding	61.2
Discounted cash flow / share	2.54

1.58

61.1

Sensitivity analysis DCF

upside/(downside)

Planning horizon avg. revenue growth (2024E-2031E)	9.5%
Terminal value growth (2031E - infinity)	2.0%
Terminal year ROCE	7.9%
Terminal year WACC	6.8%

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)	0.64
Target debt / equity	1.5
Relevered beta	1.27
Risk-free rate	2.0%
Equity risk premium	6.0%
Cost of equity	9.6%

		Long term g	Irowth		Share of present value			
23		1.0%	1.5%	2.0%	2.5%	3.0%		
	2.0%	0.2	0.4	0.6	0.9	1.2	2024E-2027E	-11.3%
in WA oints)	1.0%	0.8	1.1	1.4	1.8	2.3	2028E-2031E	10.7%
ge i °-pc	0.0%	1.7	2.1	2.5	3.1	3.9	terminal value	100.6%
Change (%-po	-1.0%	2.8	3.5	4.3	5.3	6.8		
5	-2.0%	4.7	5.8	7.3	9.5	12.9		

Source: mwb research

Research**Hub**



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 -0.36 per share based on 2024E and EUR 2.16 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	15.4	20.6	26.3	32.3	36.9
- Maintenance capex	10.1	11.2	12.4	32.3 13.5	14.6
- Minorities	0.0	0.0	0.0	0.0	0.0
- tax expenses	-2.6	-2.1	-2.3	-1.6	-1.0
= Adjusted FCF	-2.0 8.0	11.6	16.2	20.3	23.3
- Aujusteu FCF	0.0	11.0	10.2	20.5	23.3
Actual Market Cap	96.8	96.8	96.8	96.8	96.8
+ Net debt (cash)	178.4	204.7	233.0	257.6	278.3
+ Pension provisions	0.7	0.9	1.0	1.1	1.2
+ 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
EV Reconciliations	155.0	181.4	209.8	234.6	255.3
= Actual EV'	251.8	278.2	306.6	331.3	352.1
Adjusted FCF yield	3.2%	4.2%	5.3%	6.1%	6.6%
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	132.8	192.6	269.8	339.1	387.7
- EV Reconciliations	155.0	181.4	209.8	234.6	255.3
Fair Market Cap	-22.2	11.2	60.0	104.5	132.4
No. of choroe (million)	61.2	61.2	61.2	61.2	61.2
No. of shares (million) Fair value per share in EUR	-0.36	01.2	0.98	1.71	2.16
	-122.9%	-88.5%	-38.0%	8.0%	36.8%
Premium (-) / discount (+)	-122.9%	-00.0%	-38.0%	8.0%	30.8%
Sensitivity analysis FV					
		1.0			
4.0%	0.7	1.8	3.2	4.5	5.3
Adjuste 5.0%	0.1	0.8	1.9	2.8	3.4
d hurdle 6.0%	-0.4	0.2	1.0	1.7	2.2
rate 7.0%	-0.7	-0.3	0.4	0.9	1.3
8.0%	-0.9	-0.6	-0.1	0.3	0.6

Source: Company data; mwb research

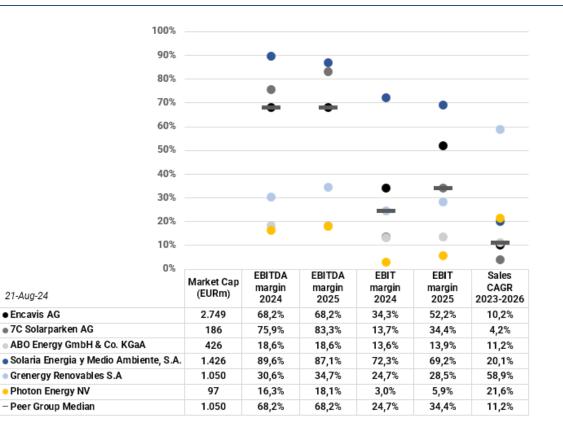
Simply put, the model assumes that investors require companies to generate a minimum return on the investor's purchase price. The required after-tax return equals the model's hurdle rate of 7.0%. Anything less suggests the stock is expensive; anything more suggests the stock is cheap. **ESG adjustments 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 21 August 2024 the median market cap of the peer group was EUR 1,050.0m, compared to EUR 96.8m 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



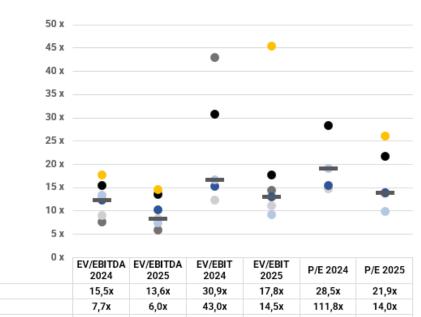
Source: FactSet, mwb research



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 0.84.

Peer Group – Multiples and valuation



LOLI	LOLO	2021	2020		
15,5x	13,6x	30,9x	17,8x	28,5x	21,9x
7,7x	6,0x	43,0x	14,5x	111,8x	14,0x
9,1x	8,3x	12,5x	11,2x	14,9x	13,9x
12,3x	10,4x	15,3x	13,1x	15,6x	13,9x
13,5x	7,6x	16,8x	9,2x	19,3x	10,1x
17,9x	14,7x	98,2x	45,5x	-52,1x	26,1x
12,3x	8,3x	16,8x	13,1x	19,3x	13,9x
0,19	-0,12	-2,16	-1,51	-0,58	0,84
	15,5x 7,7x 9,1x 12,3x 13,5x 17,9x 12,3x	15,5x 13,6x 7,7x 6,0x 9,1x 8,3x 12,3x 10,4x 13,5x 7,6x 17,9x 14,7x 12,3x 8,3x	15,5x 13,6x 30,9x 7,7x 6,0x 43,0x 9,1x 8,3x 12,5x 12,3x 10,4x 15,3x 13,5x 7,6x 16,8x 17,9x 14,7x 98,2x 12,3x 8,3x 16,8x	15,5x 13,6x 30,9x 17,8x 7,7x 6,0x 43,0x 14,5x 9,1x 8,3x 12,5x 11,2x 12,3x 10,4x 15,3x 13,1x 13,5x 7,6x 16,8x 9,2x 17,9x 14,7x 98,2x 45,5x 12,3x 8,3x 16,8x 13,1x	15,5x 13,6x 30,9x 17,8x 28,5x 7,7x 6,0x 43,0x 14,5x 111,8x 9,1x 8,3x 12,5x 11,2x 14,9x 12,3x 10,4x 15,3x 13,1x 15,6x 13,5x 7,6x 16,8x 9,2x 19,3x 17,9x 14,7x 98,2x 45,5x -52,1x 12,3x 8,3x 16,8x 13,1x 19,3x

Source: FactSet, mwb research

21-Aug-24

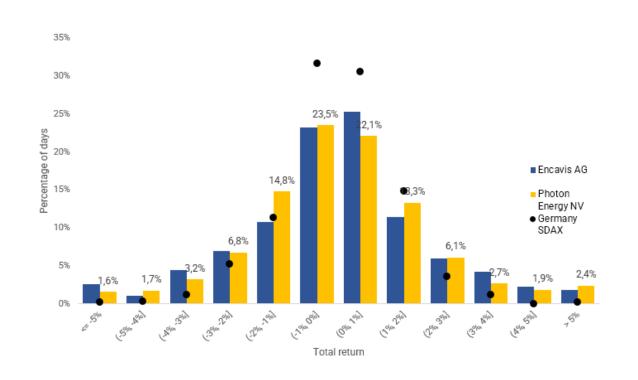




Risk

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%.



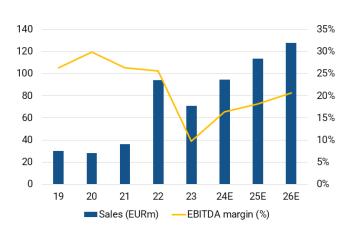


Source: FactSet, mwb research

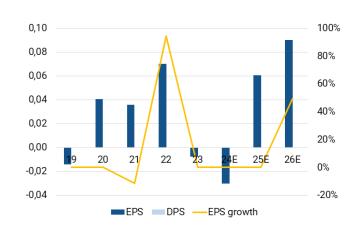


Financials in six charts

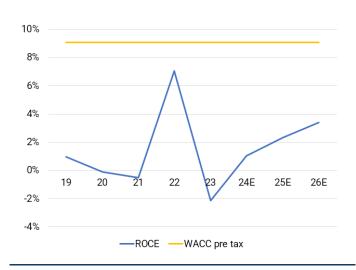




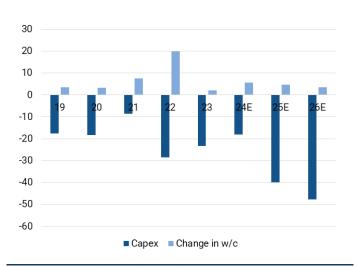
EPS, DPS in EUR & yoy EPS growth



ROCE vs. WACC (pre tax)

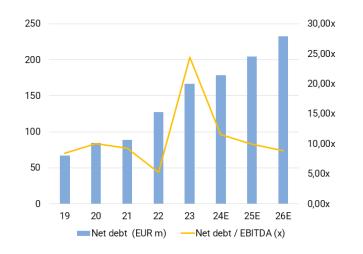


Capex & chgn in w/c requirements in EURm

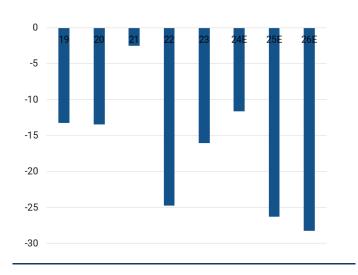


Source: Company data; mwb research

Net debt and net debt/EBITDA



Free Cash Flow in EURm







Financials

Profit and loss (EURm)	2021	2022	2023	2024E	2025E	2026E
Net sales	36.4	94.2	70.6	94.4	113.6	127.7
Sales growth	28.7%	159.1%	-25.0%	33.7%	20.3%	12.4%
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	94.4	113.6	127.7
Material expenses	12.7	44.1	36.9	24.2	30.0	31.3
Gross profit	23.6	50.1	33.8	70.3	83.6	96.4
Other operating income	0.6	0.6	4.1	5.4	6.5	7.3
Personnel expenses	6.7	9.5	18.5	41.4	49.0	60.8
Other operating expenses	7.7	17.0	12.5	18.9	20.4	16.6
EBITDA	9.6	24.1	6.8	15.4	20.6	26.3
Depreciation	10.7	9.0	12.0	12.6	14.0	15.5
EBITA	-1.1	15.1	-5.2	2.8	6.6	10.8
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	6.6	10.8
Financial result	-5.2	-8.3	-11.1	-13.4	-15.1	-20.1
Recurring pretax income from continuing operations	-6.1	6.2	-16.3	-10.5	-8.5	-9.3
Extraordinary income/loss	0.0	0.0	0.0	0.0	0.0	0.0
Earnings before taxes	-6.1	6.2	-16.3	-10.5	-8.5	-9.3
Taxes	0.5	3.5	-0.6	-2.6	-2.1	-2.3
Net income from continuing operations	-6.6	2.8	-15.8	-7.9	-6.3	-7.0
Result from discontinued operations (net of tax)	8.5	1.5	15.3	6.0	10.1	12.5
Net income	2.0	4.3	-0.5	-1.9	3.7	5.5
Minority interest	0.0	0.0	0.0	0.0	0.0	0.0
Net profit (reported)	2.0	4.3	-0.5	-1.9	3.7	5.5
Average number of shares	54.36	61.24	61.24	61.24	61.24	61.24
EPS reported	0.04	0.07	-0.01	-0.03	0.06	0.09

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%	26%	26%	25%
Gross profit	65%	53%	48%	74%	74%	75%
Other operating income	2%	1%	6%	6%	6%	6%
Personnel expenses	19%	10%	26%	44%	43%	48%
Other operating expenses	21%	18%	18%	20%	18%	13%
EBITDA	26%	26%	10%	16%	18%	21%
Depreciation	29%	10%	17%	13%	12%	12%
EBITA	-3%	16%	-7%	3%	6%	8%
Amortisation of goodwill and intangible assets	-1%	1%	0%	0%	0%	0%
EBIT	-2%	15%	-7%	3%	6%	8%
Financial result	-14%	-9%	-16%	-14%	-13%	-16%
Recurring pretax income from continuing operations	-17%	7%	-23%	-11%	-7%	-7%
Extraordinary income/loss	0%	0%	0%	0%	0%	0%
Earnings before taxes	-17%	7%	-23%	-11%	-7%	-7%
Taxes	1%	4%	-1%	-3%	-2%	-2%
Net income from continuing operations	-18%	3%	-22%	-8%	-6%	-5%
Result from discontinued operations (net of tax)	23%	2%	22%	6%	9%	10%
Net income	5%	5%	-1%	-2%	3%	4%
Minority interest	0%	0%	0%	0%	0%	0%
Net profit (reported)	5%	5%	-1%	-2%	3%	4%



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	209.0	241.2
Financial assets	14.1	12.8	24.2	24.2	24.2	24.2
FIXED ASSETS	142.5	171.2	225.0	230.5	256.5	288.7
Inventories	2.2	15.8	14.1	5.3	6.6	6.9
Accounts receivable	9.1	27.8	17.0	23.3	28.0	31.5
Other current assets	2.9	3.2	7.1	7.1	7.1	7.1
Liquid assets	39.4	21.4	13.0	11.6	10.3	2.0
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	0.8	0.9	1.0
CURRENT ASSETS	54.2	69.1	52.4	48.0	52.9	48.5
TOTAL ASSETS	196.6	240.2	277.4	278.5	309.4	337.2
SHAREHOLDERS EQUITY	51.7	60.7	69.8	67.9	71.6	77.1
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	200.0	220.0
Provisions for pensions and similar obligations	0.0	0.0	0.6	0.7	0.9	1.0
Other provisions	11.1	12.0	13.0	14.2	14.8	16.6
Non-current liabilities	111.1	150.2	178.3	189.9	215.7	237.6
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	278.5	309.4	337.2

Balance sheet (common size)	2021	2022	2023	2024E	2025E	2026E
Intangible assets (excl. Goodwill)	0%	5%	3%	3%	3%	2%
Goodwill	0%	0%	6%	5%	5%	5%
Property, plant and equipment	65%	60%	64%	66%	68%	72%
Financial assets	7%	5%	9%	9%	8%	7%
FIXED ASSETS	72%	71%	81%	83%	83%	86%
Inventories	1%	7%	5%	2%	2%	2%
Accounts receivable	5%	12%	6%	8%	9%	9%
Other current assets	1%	1%	3%	3%	2%	2%
Liquid assets	20%	9%	5%	4%	3%	1%
Deferred taxes	0%	0%	0%	0%	0%	0%
Deferred charges and prepaid expenses	0%	0%	0%	0%	0%	0%
CURRENT ASSETS	28%	29%	19%	17%	17%	14%
TOTAL ASSETS	100%	100%	100%	100%	100%	100%
SHAREHOLDERS EQUITY	26%	25%	25%	24%	23%	23%
MINORITY INTEREST	-0%	-0%	-0%	-0%	-0%	-0%
Long-term debt	51%	58%	59%	63%	65%	65%
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%	70%	70%
short-term liabilities to banks	14%	4%	5%	5%	5%	4%
Accounts payable	1%	5%	5%	2%	2%	2%
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%	7%	7%
TOTAL LIABILITIES AND SHAREHOLDERS EQUITY	100%	100%	100%	100%	100%	100%



Cash flow statement (EURm)	2021	2022	2023	2024E	2025E	2026E
Net profit/loss	-5.9	6.2	-16.3	-1.9	3.7	5.5
Depreciation of fixed assets (incl. leases)	10.7	8.9	11.9	12.6	14.0	15.5
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	1.4	0.7	1.9
Cash flow from operations before changes in w/c	13.7	23.6	9.3	12.1	18.4	23.0
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	-6.3	-4.7	-3.5
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	0.5	-0.2	-0.1
Increase/decrease in working capital	-7.6	-19.9	-2.1	-5.6	-4.7	-3.6
Cash flow from operating activities	6.1	3.7	7.2	6.5	13.7	19.5
CAPEX	-8.6	-28.4	-23.3	-18.1	-40.0	-47.7
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	0.0	0.0	0.0
Cash flow from investing activities	-14.2	-34.3	-26.7	-18.1	-40.0	-47.7
Cash flow before financing	-8.1	-30.6	-19.5	-11.6	-26.3	-28.3
Increase/decrease in debt position	29.8	18.0	14.1	10.2	25.0	20.0
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	25.0	20.0
Increase/decrease in liquid assets	14.8	-21.2	-5.4	-1.4	-1.3	-8.3
Liquid assets at end of period	32.5	11.3	5.8	4.4	3.2	-5.1
Source: Company data much research						

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	92.2	110.8	124.6
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	2.3	2.7	3.1
Total sales	36.4	94.2	70.6	94.4	113.6	127.7

29.3	89.1	68.9	92.2	110.8	124.6
0.0	0.0	0.0	0.0	0.0	0.0
0.0	0.0	0.0	0.0	0.0	0.0
7.1	5.1	1.7	2.3	2.7	3.1
36.4	94.2	70.6	94.4	113.6	127.7
2021	2022	2023	2024E	2025E	2026E
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
80.6%	94.6%	97.6%	97.6%	97.6%	97.6%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
19.4%	5.4%	2.4%	2.4%	2.4%	2.4%
100%	100%	100%	100%	100%	100%
	0.0 0.0 7.1 36.4 2021 0.0% 80.6% 0.0% 0.0% 19.4%	0.0 0.0 0.0 0.0 7.1 5.1 36.4 94.2 2021 2022 0.0% 0.0% 80.6% 94.6% 0.0% 0.0% 0.0% 0.0% 19.4% 5.4%	0.0 0.0 0.0 0.0 0.0 0.0 7.1 5.1 1.7 36.4 94.2 70.6 2021 2022 2023 0.0% 0.0% 0.0% 80.6% 94.6% 97.6% 0.0% 0.0% 0.0% 19.4% 5.4% 2.4%	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.1 5.1 1.7 2.3 36.4 94.2 70.6 94.4 2021 2022 2023 2024E 0.0% 0.0% 0.0% 0.0% 80.6% 94.6% 97.6% 97.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 2.4%	0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 0.0 7.1 5.1 1.7 2.3 2.7 36.4 94.2 70.6 94.4 113.6 2021 2022 2023 2024E 2025E 0.0% 0.0% 0.0% 0.0% 0.0% 80.6% 94.6% 97.6% 97.6% 97.6% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 0.0% 19.4% 5.4% 2.4% 2.4% 2.4%





Ratios	2021	2022	2023	2024E	2025E	2026E
Per share data						
Earnings per share reported	0.04	0.07	-0.01	-0.03	0.06	0.09
Cash flow per share	0.11	0.06	0.12	-0.06	0.04	0.11
Book value per share	0.95	0.99	1.14	1.11	1.17	1.26
Dividend per share	0.00	0.00	0.00	0.00	0.00	0.00
Valuation						
P/E	43.9x	22.6x	-210.8x	-52.1x	26.1x	17.5x
P/CF	14.0x	25.9x	13.4x	-27.1x	38.3x	13.8x
P/BV	1.7x	1.6x	1.4x	1.4x	1.4x	1.3x
Dividend yield (%)	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%
FCF yield (%)	7.1%	3.9%	7.5%	-3.7%	2.6%	7.3%
EV/Sales	5.1x	2.4x	3.7x	2.9x	2.7x	2.6x
EV/EBITDA	19.4x	9.3x	38.7x	17.9x	14.7x	12.6x
EV/EBIT	-218.1x	15.4x	-50.8x	98.2x	45.5x	30.8x
Income statement (EURm)						
Sales	36.4	94.2	70.6	94.4	113.6	127.7
yoy chg in %	28.7%	159.1%	-25.0%	33.7%	20.3%	12.4%
Gross profit	23.6	50.1	33.8	70.3	83.6	96.4
Gross margin in %	65.0%	53.1%	47.8%	74.4%	73.6%	75.5%
EBITDA	9.6	24.1	6.8	15.4	20.6	26.3
EBITDA margin in %	26.4%	25.5%	9.7%	16.3%	18.1%	20.6%
EBIT	-0.9	14.5	-5.2	2.8	6.6	10.8
EBIT margin in %	-2.3%	15.4%	-7.4%	3.0%	5.9%	8.4%
Net profit	2.0	4.3	-0.5	-1.9	3.7	5.5
Cash flow statement (EURm)						
CF from operations	6.1	3.7	7.2	6.5	13.7	19.5
Сарех	-8.6	-28.4	-23.3	-18.1	-40.0	-47.7
Maintenance Capex	0.0	0.0	0.0	10.1	11.2	12.4
Free cash flow	-2.5	-24.7	-16.1	-11.6	-26.3	-28.3
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	209.0	241.2
Shareholders' equity	51.7	60.7	69.8	67.9	71.6	77.1
Pension provisions	0.0	0.0	0.6	0.7	0.9	1.0
Liabilities and provisions	139.6	160.6	193.4	204.9	230.7	252.6
Net financial debt	89.1	127.3	166.8	178.4	204.7	233.0
w/c requirements	9.0	31.2	16.5	22.6	27.2	30.6
Ratios						
ROE	3.8%	7.0%	-0.7%	-2.7%	5.2%	7.2%
ROCE	-0.4%	6.6%	-2.0%	1.0%	2.2%	3.3%
Net gearing	172.4%	209.6%	239.1%	262.8%	285.9%	302.0%
Net debt / EBITDA	9.3x	5.3x	24.4x	11.6x	9.9x	8.9x



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Company	Disclosure
Photon Energy NV	2, 8





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- 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.

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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.

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