Equity Valuation of Energiekontor AG

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Abstract

This dissertation aims to determine the target price of Energiekontor AG, an established Independent Power Producer (IPP) in Germany that is operative in several European countries. The research question of the thesis is as follows: "What is Energiekontor's fair value per share at of the 1st of January 2024 and resulting upside or downside potential for investors?" The valuation for German S-DAX listed Energiekontor is based on a profound company, competitor and market analysis, including past development and future outlook of Energiekontor's financials and market trends in the project development and power generation sector. The valuation techniques comprise the WACC DCF-method as representative for the intrinsic valuation and is complemented by a Monte Carlo simulation and a relative valuation, using backward looking multiples. The valuation results in a target price of EUR 114.2 per share. Compared with a closing price of EUR 82.7 per share on Friday the 29th of December 2023 (last trading day in 2023), a buy recommendation can be issued due to a significant upside potential of up to 38.1%. Furthermore, the buy recommendation is in line with the considered equity research report of First Berlin Equity (FB).

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Keywords: DCF, Valuation, NPV, Fair Value, Analyst Report

Resumo

Esta dissertação tem como objetivo determinar o preço-alvo da Energiekontor AG, um Produtor Independente de Energia (IPP) estabelecido na Alemanha e que opera em vários países europeus. A questão de investigação da tese é a seguinte: "Qual é o valor justo da Energiekontor por ação em 1 de janeiro de 2024 e o potencial de subida ou descida resultante para os investidores?" A avaliação da Energiekontor, cotada no S-DAX alemão, baseia-se numa análise profunda da empresa, da concorrência e do mercado, incluindo a evolução passada e as perspectivas futuras das finanças da Energiekontor e as tendências do mercado no sector do desenvolvimento de projectos e da produção de energia. As técnicas de avaliação incluem o método WACC DCF como representativo da avaliação intrínseca e é complementado por uma simulação de Monte Carlo e uma avaliação relativa, utilizando múltiplos retrospectivos. A avaliação resulta num preço-alvo de 114,2 euros por ação. Em comparação com um preço de fecho de EUR 82,7 por ação na sexta-feira, 29 de dezembro de 2023 (último dia de negociação em 2023), pode ser emitida uma recomendação de compra devido a um potencial de subida significativo de até 38,1%. Além disso, a recomendação de compra está em conformidade com os estudos sobre acções do First Berlin Equity Research (FB).

Autor: Malick M'Baye
Título: Avaliação do capital próprio da Energiekontor
Palavras-chave: DCF, Avaliação, NPV, Valor Justo, Reporte de Analista

List of Abbreviations

DCF	Discounted Cash Flow
FCFF	Free cash flow to the firm
TV	Terminal Value
EV	Enterprise Value
EQ	Equity Value
WACC	Weighted Average Cost of Capital
CoE	Cost of Equity
CoD	Cost of Debt
SG&A	Selling, General and Administrative Costs
PP&E	Property, Plant and Equipment
EBIT	Earnings before interest and taxes
EBITDA	Earnings before interest, taxes, depreciation and amortization
OpEx	Operational Expenditures
CapEx	Capital Expenditures
APV	Adjusted Present Value
CAPM	Capital Asset Pricing Model
EBT	Earnings before Taxes
MRP	Market Risk Premium
IPP	Independent Power Producer
PER	Price Earnings Ratio
PPA	Power Purchase Agreement
EEG	Erneuerbare-Energien-Gesetz (Renewable Energy Act)
USA	United States of America
UK	United Kingdom
NOPAT	Net Operating Profit after Taxes

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1 Literature Review

1.1 Discounted Cash Flow Valuation

The equity valuation which will be conducted in the course of this master thesis focuses mainly on a DCF valuation. The approach of a DCF valuation is based on the rationale that the intrinsic value of any asset is derivable by the present value of its expected future cash flows. A further assumption is that the market price of a security can differ from its intrinsic value. The concept of a DCF valuation is that the value of an asset can be expressed as a function of its future cash flows and the respective discount rate, expressed in Formula 1 (Pinto, 2010).

$$(\mathbf{1}) \quad Value\,(CF, r) = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t}$$

$CF_t = Cash\ flow\ of\ the\ respective\ period$

$r = Discount\ rate$

The cash flow and discount rate are explained in further detail in the following chapters. For a company valuation it is common practice to forecast the cash flows of the respective company for a limited period. Therefore, a terminal value is usually assumed for mature companies after a forecasting period of, e.g. 5 years. A terminal value determined after the fifth year thus represents the residual value of the company in year 5 (Pinto, 2010).

$$(\mathbf{2}) \quad Terminal\ Value = \frac{CF_n(1+g)}{(r-g)}$$

g = predicted growth rate after the year n

Following a DCF valuation approach, the value of a company can be derived by applying the following approach. The cash flows are forecasted up to year n and discounted with the respective discount rate, lefthand side of Formula 3. This forecasting period is also called the explicit period as the cash flows are forecasted for each year individually. For the residual value of the company in year n, a terminal value is computed, based on the last cash flow which has been forecasted for the explicit period. This terminal value is then discounted with the long-term discount rate, which can differ from the discount rate of the explicit period (Damodaran, 2012).

$$(3) \quad Value_{t=0} = \sum_{t=1}^{n} \frac{CF_t}{(1+r)^t} + \frac{Terminal\ Value_n}{(1+r)^n}$$

1.2 Free Cash Flow to the Firm (FCFF)

The most commonly used cash flow in DCF valuations is the FCFF. The FCFF consists of the cash flows that are attributed to all claim holders of a firm. Hence, all subcategories of equity and debt claim holders are considered by the FCFF. The FCFF can accordingly be separated into cash flows attributable to equity claim holders (free cash flow to equity) and cash flows to lenders (principal repayment and interests). By assuming no tax related debt benefits, the FCFF can be derived from the EBIT by adjusting it by adding non-cash charges and subtracting cash relevant items (Fernández, 2006):

TABLE 1: FCFF DERIVATION

Earnings before interests and taxes (EBIT)
-Tax on EBIT
= Net operating profit after taxes (NOPAT)
+ Depreciation & Amortization
- Changes in Net Working Capital (NWC)
- Capital Expenditures (CAPEX)
= Free Cash Flow from Operations
+/- Cash flow from non-operating activities
= Free Cash flow to the Firm (FCFF)

To determine a company's Enterprise Value, the projected FCFFs are discounted with the company's cost of capital, represented by the WACC. The Enterprise Value can therefore be derived as follows (Fernández, 2006):

$$(4) \quad EV_{t=0} = \sum_{t=1}^{n} \frac{FCFF_t}{(1+r)^t} + \frac{TV_n}{(1+WACC)^n}$$

$EV_{t=0} = Implied\ Enterprise\ Value$ $\qquad$ $TV_n = Residual\ Value\ in\ period\ n$

$FCFF_t = FCFF\ of\ the\ firm\ at\ time\ t$

Nevertheless, in some cases the application of the DCF valuation with FCFFs is limited. The application is restricted for companies that experience fluctuations is their capital structure, as well if significant capital investments are required, or a company faces financial distress

(Damodaran, 2012). Due to Energiekontor's stable capital structure, the described DCF valuation method can be applied without any further restrictions.

1.3 Free Cash Flow to Equity (FCFE)

As an alternative to a pre debt DCF valuation, the FCFF can be adjusted for cash flows that are related to debt claims. In contrast to the FCFF DCF where the Enterprise Value is computed, a FCFE DCF directly derives the Equity Value of a company by discounting the FCFE with the CoE. The FCFE is obtained by adjusting the FCFFs of a firm for net borrowings, which represents the delta of newly issued debt and the debt service in form of interest and principal payments to debtholders. The FCFE can be calculated either from FCFF or derived directly from the net income. Table 2 presents the calculation based on the FCFF (Fernández, 2006):

TABLE 2: FCFE DERIVATION

Earnings before interests and taxes (EBIT)
- Tax on EBIT
= Net operating profit after taxes (NOPAT)
+ Depreciation & Amortization
- Changes in Net Working Capital (NWC)
- Capital Expenditures (CAPEX)
= Free Cash Flow from Operations
+/- Cash flow from non-operating activities
= Free cash flow to the Firm (FCFF)
+ Issued Debt
- Debt Repayment
- Interest Expenses * (1 - tax rate)
= Free Cash Flow to Equity (FCFE)

After the FCFE is obtained, the same DCF methodology applies. Main difference in comparison to the FCFF DCF is the discount rate, which only reflects the cost of capital for the company's equity:

$$(5) \quad EQV_{t=0} = \sum_{t=1}^{n} \frac{FCFE_t}{(1+r)^t} + \frac{TV_n}{(1+k_e)^n}$$

$EQV_{t=0} = Implied\ Equity\ Value$ $\quad$ $TV_n = Residual\ Value\ in\ period\ n$

$FCFE_t = FCFE\ of\ the\ firm\ at\ time\ t$ $\quad$ $k_e = Cost\ of\ Equity$

It is important to note that when applying the same assumptions and inputs for the FCFF and FCFE DCF method, in principle both methods should result in the same equity value or Enterprise Value (Damodaran, 2012). The Equity Value can be computed by deducting the market value of debt and adding the market value of cash and vice versa:

$$(6) \quad Equity\,Value = Enterprise\,Value - Total\,Debt + Cash$$

1.4 Weighted Average Cost of Capital (WACC)

In financial management, the WACC serves as a crucial metric that represents the average rate of return a company is expected to pay its investors for the capital it has raised. Both equity and debt investors require a return that not only compensates them for the risk they undertake but also accounts for the time value of money. The WACC consolidates these demands into a single metric which quantifies the firm's cost of capital from all financing sources (Damodaran, 2012).

$$(7) \quad WACC = k_E * \frac{E}{E+D} + k_D * \frac{D}{E+D} * (1-t)$$

Where:

$k_E = Costof\ Equity$	$E = Market\,Value\,of\,Equity$
$k_D = Costof\ Debt$	$D = Market\,Value\,of\,Debt$
$t = Company's\,marginal\,income\,tax\,rate$	E + D = Total Assets / Liabilities

However, the application of the WACC also comes with limitations, especially in the context of dynamically changing capital structures. As the firm evolves, the equity and debt structure may fluctuate, altering the WACC and thereby affecting investment decisions. Similarly, changes in market conditions can affect the cost of equity and debt, which can lead to an unstable WACC (Pinto, 2010). Even for mature firms, periodic adjustments of the WACC may be required, e.g. if the cost of debt increases due to an unexpected increase in the risk-free rate. An alternative to a WACC based DCF valuation is the Adjusted Present Value Method (APV). Nevertheless, the APV method won't be explained in further detail, as Energiekontor's stable capital structure allows for the application of a FCFF DCF valuation (Pinto, 2010).

1.5 Risk Free Rate

In the context of corporate valuations, the risk-free rate serves as a foundational element that encapsulates the time value of money. Typically represented by the yield on government bonds of countries that are considered as stable. These government bonds offer a baseline for the risk-

free rate against which the expected returns of other assets can be assessed. High-rated, government bonds are generally employed as proxies for the risk-free rate, unlike corporate bonds, they are largely insulated from market fluctuations and default risks (Damodaran, 2012).

To ensure congruency in financial forecasting, the risk-free rate should be denominated in the same currency as the firm's forecasted cash flows. This approach neutralizes the confounding impacts of currency risk and inflation. Additionally, the maturity of the government bond should align with the period of the firm's projected cash flows. Often, a 10-year government bond yield serves as a widely accepted benchmark, as it reflects a long-term investment horizon (Damodaran, 2012).

1.6 Cost of Equity

The cost of equity represents the expected rate of return that an equity investor demands for the associated risk of the respective equity investment. This rate goes beyond the risk-free rate and includes a risk premium.

The Capital Asset Pricing Model (CAPM) is in valuations the most used framework for estimating the cost of equity. The CAPM comes with a set of assumptions that both underpin and limit its application. The model assumes that all investors act in a rational way and that markets are efficient. Furthermore, the model presupposes that an asset's expected return is solely a function of its systematic risk, excluding other types of risks such as liquidity risk. A further assumption of the CAPM is that an investor has unlimited borrowing and lending capacities at the risk-free rate. These assumptions often deviate from real world conditions, casting doubts on the model's universal applicability (Damodaran, 2010).

$$(8) \quad Costof\ Equity = R_f + \beta * (\mathrm{R_m} - \mathrm{R_f})$$

R_f is the risk-free rate, β is the asset's sensitivity to market risk, and R_m is the expected market return of a suitable index e.g., the DAX40 would be a suitable index for a large German listed company. While the CAPM provides a theoretical framework for its calculation, the model's assumptions and limitations should be carefully considered (Damodaran, 2010).

1.7 Cost of Debt

The cost of debt represents the required rate of return that a prudent investor would require on debt capital. By incorporating the default risk of a company's debt, investors demand a premium on top of the risk-free rate as compensation for the default risk of the company, effectively

increasing the cost of debt. This spread varies in proportion to the perceived likelihood and severity of a default event. The pretax cost of debt can therefore be described as follows (Callahan & Mauboussin, 2023):

$$(9) \quad k_{d_{(pre\ tax)}} = R_f + default\ spread$$

The most ideal method for determining the cost of debt is by calculating the yield-to-maturity (YTM) of the firm's publicly traded bonds. For firms without publicly traded bonds or only infrequently traded bonds, there are two alternative approaches applicable. A credit rating can be obtained from one of the major credit rating agencies (S&P, Moody's and Fitch). Following this methodology, a default spread is assigned to each credit rating level and consequently to the company's ability to repay its debt. A further option is to compute a debt coverage ratio, which assesses the financial ability of a company to serve its debt payments. After obtaining the pre-tax cost of debt, it can be adjusted for the applicable tax rate, as interest expenses are tax-deductible. Investors usually consider the after-tax cost of debt (Callahan & Mauboussin, 2023).

$$(10) \quad k_{d_{(after\ tax)}} = k_{d_{(pre\ tax)}} * (1 - t_c)$$

$$k_{d_{(after\ tax)}} = Cost\ of\ Debt\ after\ taxes \qquad t_c = Company's\ marginal\ tax\ rate$$

1.8 Tax Rate

According to Damodaran 2012, the appropriate tax rate for an equity valuation is the marginal tax rate, rather than the effective tax rate. The marginal tax rate is based on the statutory tax rate of a country's jurisdiction, calculated as the tax rate applied to the last dollar of income of the respective company, also known as corporate income tax (CIT) (Damodaran, 2002). While the effective tax rate is computed by dividing total taxes paid by total taxable income.

$$(11) \quad Effective\ tax\ rate\ = \frac{Taxes\ paid}{EBT}$$

$$EBT = Earnings\ before\ taxes$$

An argument for the application of the marginal tax rate is that a lower or higher effective tax rate is converting to the marginal tax rate in the long run. Nevertheless, firms with operating losses won't benefit from the tax deductibility of interest, making their after-tax and pre-tax cost of debt identical in a year with a negative EBT (Damodaran, 2002).

1.9 Market Risk Premium

According to the Capital Asset Pricing Model (CAPM) the Market Risk Premium (MRP) represents the expected excess return of the market portfolio, which comprises all available stocks that are tradable. This premium indicates an investor's risk tolerance for holding a diversified but still risky portfolio (Fernández, 2006). While academic consensus on the optimal methodology for estimating the MRP remains elusive, practitioners commonly rely on historical market returns as a future proxy. However, MRP estimates can vary due to differing assumptions such as the chosen equity index, the time frame, risk-free rate, and the applied method for the computation of mean returns (Pinto et. al 2010). Following guidelines from the Institute of Public Auditors in Germany (IDW) from 2019, it is advisable to employ a MRP within a range of 5% to 6.5% (Institut der Wirtschaftsprüfer in Deutschland e.V [IDW], 2019).

It is important to emphasize that the choice of a suitable index is elementary for the determination of the MRP. Therefore, the index should be in the same country as the chosen company and match with the size of the company. The size of the index is particularly important, as market risk premia have shown to differ for small and large cap companies (Damodaran, 2012).

Furthermore, for companies that operate in riskier countries, it is advisable to incorporate an additional Country Risk Premium (CRP) (Pinto, 2010). The most straightforward approach to determining the CRP involves using the credit rating that assesses the sovereign default risk associated with a nation’s debt. Annually, Damodaran releases these country-specific premiums and suggests adding the CRP in a particular weighting manner (Damodaran, 2002). The cost of equity formula can therefore be shown in the following manner:

$$(\mathbf{12}) \quad k_e = R_f + \beta^L * MRP + w_i * CRP$$

$\beta^L = Levered\ beta\ of\ Company$ $\qquad$ $MRP = Market\ Risk\ Premium$

$w_i = Country's\ weight\ of\ revenues$ $\qquad$ $CRP = Country\ Risk\ Premium$

1.10 Beta

The beta is a return sensitivity measurement to a macroeconomic factor, which is usually a market index like the DAX40 or S&P500 (Pinto, 2010). The levered beta of a company is defined as the covariance of the company’s stock with the market portfolio, divided by the

variance of the market. Following this computation methodology, it quantifies the deviation of the company's return in comparison to the market's returns (Pinto, 2010).

$$(\mathbf{13}) \quad \beta_i^L = \frac{Cov(r_i, r_M)}{Var(r_M)}$$

$\beta_i^L = Levered\ beta\ of\ Company\ i$

$Cov = Covariance\ of\ Company\ i's\ returns\ and\ the\ returns\ of\ the\ Market$

Var = Variance of the Market returns

Please note that the Covariance of the market itself is the variance of the market. Consequently, the markets beta always equals one. Following this methodology, assets with a higher return volatility than the market have a beta larger than one and assets with a lower return volatility than the market have a beta lower than one (Damodaran, 2002). Since the obtained levered beta is considering past returns, it is also described as raw backwards looking beta. Furthermore, it is needs to be emphasized that the underlying return data must be based on a sufficiently long period of time that can also be considered representative for the future risk of the company, to avoid unrepresentative fluctuations due to short-term developments (Pinto, 2010). It is common practice to consider weekly or monthly data of the last 5 years, if applicable the time frame can also be adjusted to the specific valuation case (Berk & DeMarzo, 2014).

Blume Beta Adjustment:

Since a valuation is forward-looking, the in Fomula 13 presented beta does not consider the effect described by Blume 1979, that the beta of an asset converges to the beta of the market in the long run, which equals to one. Blume recommends an adjustment of the raw beta as described in the equation below (Blume, 1979):

$$(\mathbf{14}) \quad Blume's\ Adjusted\ -\ \beta_i^L = \frac{2}{3} * raw\ \beta_i^L + \frac{1}{3} * raw\ \beta_M$$

$\beta_i^L = Levered\ beta\ of\ Company \qquad \beta_M = Beta\ of\ the\ Market$

Peer group analysis:

In cases where an entity-specific beta factor is not accessible or provides limited insights into the risk factors, Damodaran 2002 recommends deriving the beta from comparable companies (peers), a method known as peer group analysis. However, in case a peer group

is used for a beta derivation, it is essential to ensure that the companies comprising the peer group exhibit the highest possible comparability with the valued company in terms of systematic risk.

This comparability should also extend to factors such as the peers' business activities, presence in similar markets, and comparable size, among others. Once comparable companies have been identified, the above-described beta derivation can be applied to obtain the levered betas of the peers. As the obtained peer betas are levered with the respective leverage of the peer company, the betas need to be unlevered with the respective leverage. This unlevered beta excludes the financial risk and is solely reflecting the pure systematic risk of the peer. Usually, an average of several peer betas is used and in a final step this average peer beta is then releveled with the leverage of the valued company (Damodaran, 2002).

$$\beta_i^L = \beta_{Peer}^U * (1 + (1 - t) * \frac{D}{E}) \quad \textbf{(15)}$$

$\beta_{Peer}^U = Average\ Unlevered\ beta\ of\ peers$ $\qquad$ $\frac{D}{E} = Debt\ to\ Equity\ Ratio$

1.11 Relative Valuation

Most often valuations are mainly concentrating on discounted cash flow analysis, although in practice most valuations are relative valuations (Damodaran, 2012). The principle of a relative valuation is that the value of a company is derived from the pricing of comparable companies, using a standardized financial metric like earnings or revenues. Two often applied multiples in valuation are the price earnings ratio (PER) as well as the Enterprise value to EBITDA ratio. The whole relative valuation approach assumes hereby that the pricing of the market is on average correct (Damodaran, 2012). The beforementioned multiples are based on publicly available market data. Another form of multiples are transaction multiples, which are based on actual transactions, however, transaction multiples are often not published and in addition they often include a premium on top of the fair equity value (Koller et al., 2015).

A typical method for applying multiples involves assessing how a company's valuation aligns with the pricing of similar firms in the market, or in certain instances, how the company's valuation compares to its own past valuations in previous periods (Koller et al., 2015). In the course of this paper, a suitable peer group will be selected and based on an average ratio, e.g. the enterprise value to EBITDA ratio, Energiekontor will be valued. This valuation approach

comes with certain challenges. Similar to the selection of a peer group for the beta computation, it can be challenging to find suitable peers that match in regard of several metrics (size, business units, growth, profitability) (Damodaran, 2012).

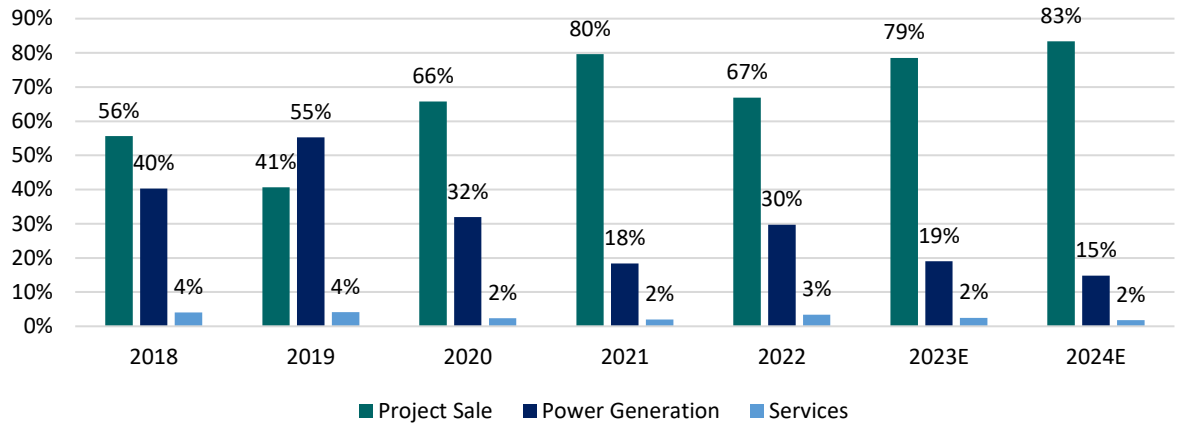
2 Company Analysis

The presented company specific information of the second, third and fourth chapter are based on the information and financials of the 2022 annual report (EnergieKontor, 2022) and half-year report of 2023 (EnergieKontor, 2023), unless otherwise stated. Energiekontor AG was founded in Bremen, Germany in 1990 and is a pioneer in the German renewable energy sector. The company's main field of activity is the development of wind and solar plants. Since the company was founded, projects with a total capacity of 1,300 MW have been realized, which corresponds to a total investment volume of c. EUR 1.8 billion. In addition to the project development segment, the company is also managing its own portfolio of 40 power generating plants (solar and wind plants), with a total capacity of 390 MW. Therefore, Energiekontor is not only a project developer, but also an Independent Power Producer (IPP). A third operational segment of the company is the service segment, which mainly offers services for the management and operation of power generating plants. Excluding apprentices, Energiekontor employed 160 employees in 2022.

The revenue distribution of the three company segments from 2018 until 2022 is depicted in the Figures 1 and 2, in absolute as well as relative terms. The revenues of the power generation and service segment have been stable over the last years. With an exemption in 2022, with significantly higher revenues in the power generation and service segment[1], due to an exceptional increase in power prices, related to the war in Ukraine and the associated gas price increase.

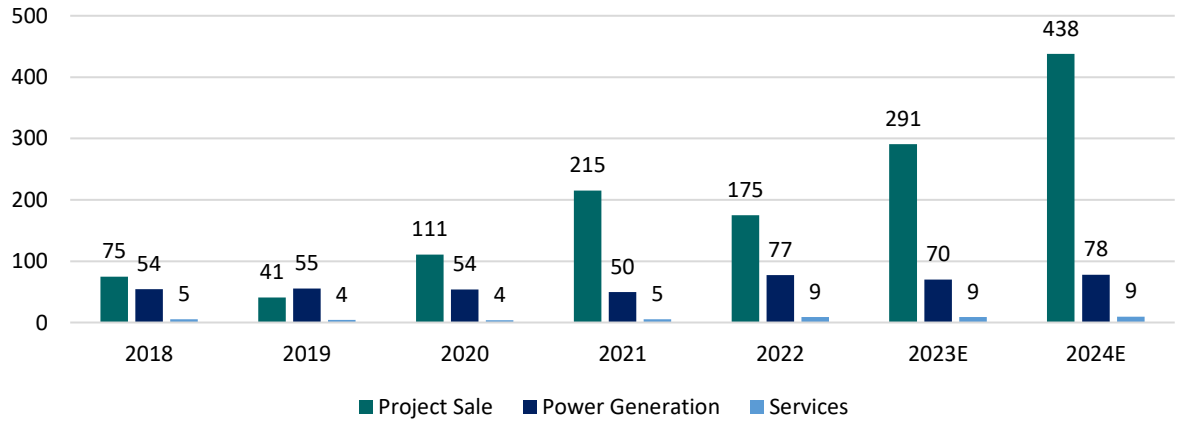
[1] It is common that service contracts are linked to the performance of the respective asset

FIGURE 1: REVENUE PER SEGMENT DISTRIBUTION IN %



The revenues of the power generation and service segment have been stable over the last years. With an exemption in 2022 with significantly higher revenues in the power generation segment, due to an exceptional increase in power prices, related to the war in Ukraine and the connected increase of gas prices. The main driver of Energiekontor's revenue growth is the project sale segment. However, the growth comes with a flaw, which is that the sale of projects is by nature a volatile business, e.g. due to delays in the project development itself or macroeconomic factors such as supply chain issues or rising interest rates. Nevertheless, Energiekontor managed to triple the segment's revenues in 2021 compared to 2019.

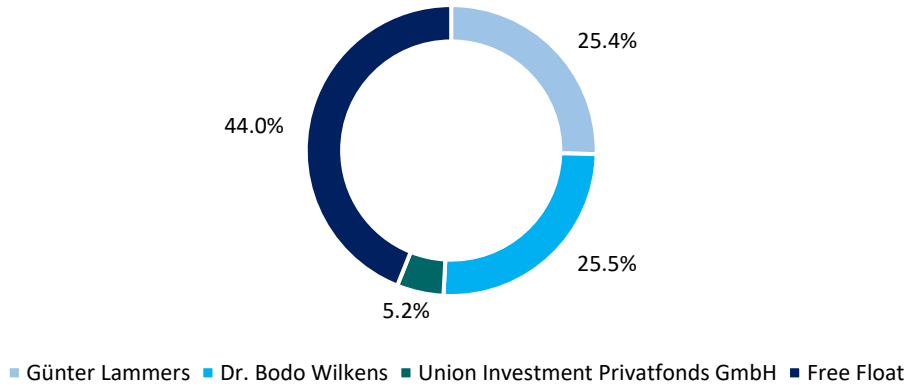
FIGURE 2: REVENUE DISTRIBUTION IN EURM



2.1 Shareholder Structure

Energiekontor AG went public on the Frankfurt Stock Exchange in 2000 (Manager Magazin, 2002). As of the 1st January 2024, 44% of the shares are in free float. The remaining shares are held by the founders Günter Lammers (25.4%) and Dr. Bodo Wilkens (25.5%), the institutional investor Union Investment holds (5.2%). The two founders still hold a majority stake of 50.9%, thus Energiekontor can still benefit from the expertise of the founders, as both are still active board members.

FIGURE 3: SHAREHOLDER STRUCTURE



The publicly traded shares represent 44% of the total shares outstanding. Considering the average daily trading volume from 2019 until 2023, the daily turnover of free float stocks is 0.23%. This results in an annualized turnover of free float stocks of 58.8%. Given the size of the company, a trading volume of more than half of all free float stocks appears to be a liquid trading volume.

FIGURE 4: DAILY CLOSING PRICE & TRADING VOLUME

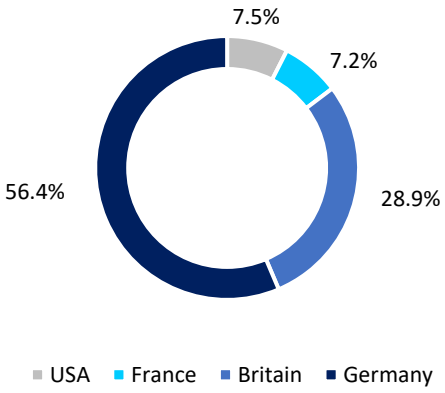
2.2 Segment Analysis

2.2.1 Project Sale

The wind and solar parks that are eye marked for an external sale are commonly sold to institutional investors. As of the end of the first half of 2023, Energiekontor has a project pipeline of 10,030 MW, of which 256 MW are under construction and 610 MW have received all relevant permits to begin construction. For a capacity of 1,194 MW, the project relevant permits have already been applied for. For the remaining capacity of 7,970 MW, the land plots have already been secured, which is after the initial assessment of the suitability of the project one of the first critical development milestones.

In addition to the European pipeline of 10,030 MW, Energiekontor also has a project pipeline in the USA of 470 MWp (solar) and 344 MW (wind) capacity, which are available for sale. In terms of regional distribution, Germany remains Energiekontor's core market with more than 56% of the total project pipeline. Over the last years Energiekontor also established a remarkable pipeline in the UK with a share of 28.9%, which makes the UK to the second largest core market. Furthermore, France and the USA, with each approximately 7% reflect Energiekontor's increasing regional diversification.

FIGURE 5: ENERGIEKONTOR PROJECT PIPELINE (GEOGRAPHIC)



Alongside to the regional diversification, Energiekontor has also diversified its development pipeline in terms of technologies. A clear strategy is being pursued to further expand the solar pipeline in line with the strong focus on wind energy. As of June 2023, the share of solar capacity in the total project pipeline is 31.3%, respectively 68.7% for wind. Between 2018 and 2022, the project sale segment achieved a revenue growth of 23.7% (CAGR) and since 2020 the segment is profitable with an average EBIT margin of 20.9%.

2.2.2 Power Generation

The second-largest segment in terms of revenue share is the power generation segment with the company owned wind and solar parks. Energiekontor sells the produced power on the market or via PPAs. The expansion of the group's wind and solar portfolio is an elementary component of Energiekontor's growth model. According to Energiekontor's strategy, around 50% of the completed wind and solar parks of the development segment are sold externally and the remaining 50% are transferred to the company's own portfolio.

The power generation segment provides the company with a stable income stream, which generally covers all development costs of the entire development pipeline as well as all other operational expenses. The power generation segment is therefore an essential core component of the company's organic growth model. The expansion of the company's portfolio is achieved by the acquisition of the self-developed projects. Consequently, the company is generally not dependent on external financing for further growth of the pipeline. Solely for the capital intense investments for solar modules, wind turbines, grid infrastructure, etc. long-term debt financing is required, which is common practice in project finance and explains Energiekontor's high debt to equity ratio[2] of 306.4% in 2022 (Refinitiv Eikon, 2024).

Since the establishment of the company, 2,680 GWh of power have already been produced, which corresponds to the annual electricity consumption of around 825,000 German households. For the electricity generation segment, it is important to note that the revenues are highly volatility due to fluctuations in power production[3] and/or electricity prices, latter can be mitigated via PPAs.

Nevertheless, energy producers are regarded as low-risk companies, which also explains the high leverage and low beta of Energiekontor (Werner & Jarvis, 2023). The attached low risk of energy producers can be attributed to 4 core aspects which are repeatedly mentioned in academical literature: the longevity of the assets, high market entry barriers, inflation protection and stable cash generation. Foundational infrastructure assets are anticipated to remain operational for several decades before they need to be replaced or decommissioned (McCarthy & Miller, 2022). For example, solar plants have an anticipated operational term of 35 to 40 years and wind plants of 25 to 30 years, and at the end of their useful life the turbines or solar

[2] Based on book values
[3] Due to lower sun irradiation or wind outcome than assumed for the business case

panels can be replaced, which is known as repowering (Renewable Energy World, 2019) (Vector Renewables, 2022).

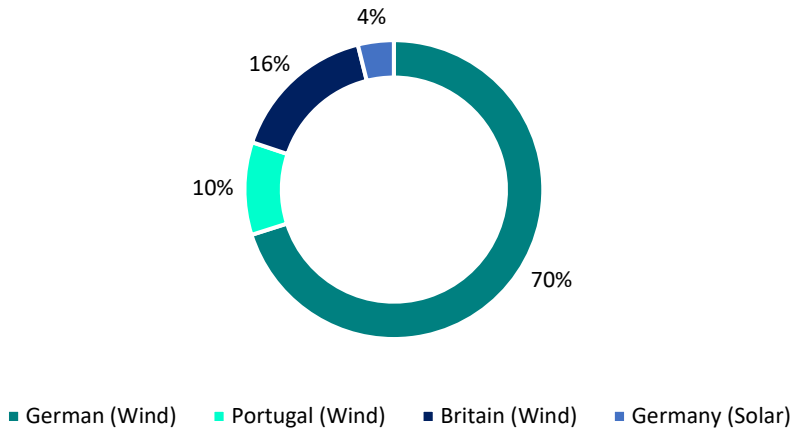
Due to the required capital investments in infrastructure and the extensive timelines for the planning and construction, the market entry barriers are high for potential new participants, which ultimately limits the number of competitors. An aspect that is of particular importance for institutional investors is the inflation protection of infrastructure assets. Revenues are often directly tied to inflation, either through pricing formulas established by the asset's regulator or contractual arrangements that account for inflation (McCarthy & Miller, 2022). For example, electricity prices rose by around 16% in 2023 compared to the previous year. The price increase was largely driven by high gas prices, which lead to an overall increase in power prices, based on the Merit-Order-Model[4] (Tagesschau, 2023).

It is important to highlight that the revenue increase of 55.8% in the power generation segment in 2022 is due to a sharp rise in electricity prices, which is connected to an increase in gas prices. Gas prices skyrocketed due to Russia's attack on Ukraine and the associated fear of supply bottlenecks or import stops. The gas price increase was based on the status quo of 2021, where 45% of all gas imports of the EU came from Russia. For Germany, the dependency was even higher at 52%. The European countries significantly decreased their dependency after the invasion of Ukraine. In Q1 2023 Russian gas only accounted for 17.4% of all gas imports (CNN, 2023). Furthermore, the mild winter of 2022/2023 and the reduced dependency on Russian gas led to a normalization of gas prices. Prior to the invasion of Ukraine, the gas price stood at 80-90 EUR / MWh. Over the summer in 2022 the price peaked at 339.2 EUR / MWh in August, however, at the end of 2023 the gas price fell to 32.35 EUR / MWh (Trading Economics, 2024).

Lastly, infrastructure assets commonly operate under regulatory frameworks or long-term contracts, providing clear insight into forthcoming cash flows. This typically results in a reliable income stream, which can be utilized for investor distributions or for capital expenditures (McCarthy & Miller, 2022). Energiekontor's solar and wind assets are mainly selling the produced power via PPA or EEG[5] tariffs that guarantee the producer a fixed price per MWh of produced power over a fixed term of e.g., 5 years. The Figure below depicts the geographical and technological characteristics of the power generation portfolio, which clearly shows a focus on the German market and on wind energy.

[4] For a detailed description of the Merit-Order-Model please refer to the Appendix
[5] Please refer to the Appendix for a detailed description

FIGURE 6: ENERGIEKONTOR POWER GENERATION PLANTS



Between 2018 and 2022, the power generation segment achieved a revenue growth rate of 7.4% (CAGR). The average EBIT-Margin from 2018 to 2022 was 39%, with a significantly higher EBIT-Margin in 2022 of 52%, mainly due to higher power prices.

2.2.3 Services

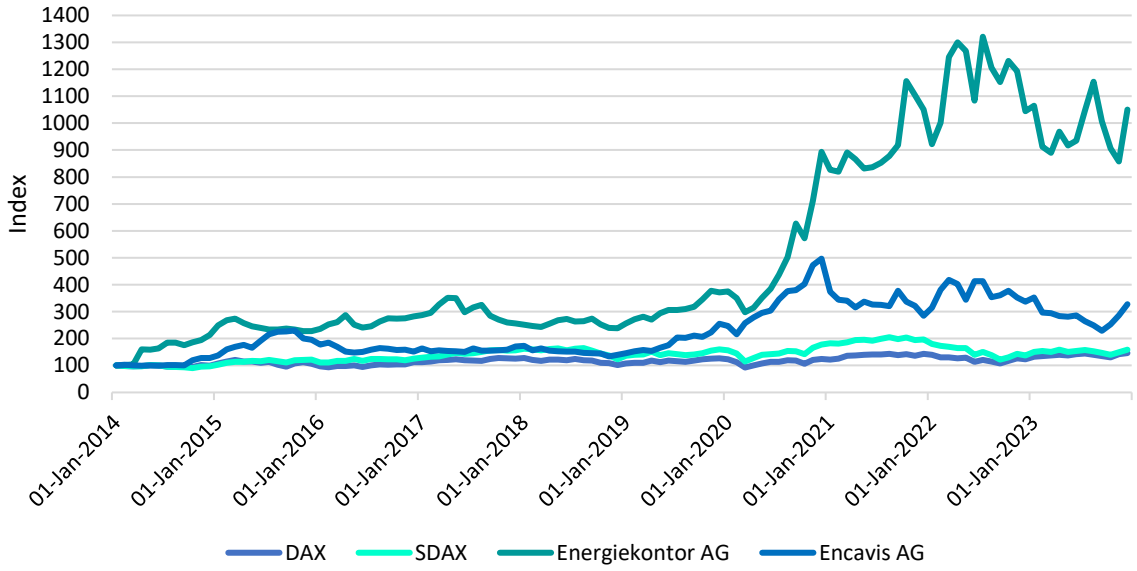
The smallest segment is the service segment, with a revenue share of 3 - 4% of total revenues in 2022. The segment comprises all measures aimed at optimizing the operational value creation of wind and solar parks after they have been commissioned. This includes mainly the technical and commercial management of the parks, including the marketing of the generated electricity as well as all measures to reduce costs, extend the operational life and increase the yield of wind and solar parks. Regardless of whether the power plants are sold or taken over into the company's portfolio, Energiekontor generally takes over the commercial and technical management. This generates an ongoing cash flow from the management of the plants over their lifetime. Between 2018 and 2022, the service segment achieved a growth rate of 10% (CAGR). The average EBIT-Margin from 2018 to 2022 was 33%.

2.3 Benchmarking

Based on monthly stock returns from 2014 until 2023 (10 Years), Figure 7 depicts an outperformance of Energiekontor's stock in comparison to the German DAX and S-DAX indices and Energiekontor's main peer Encavis AG, with a growth of 29.4% (CAGR) over 10 years. Notably, Energiekontor's stock performance accelerated in 2021, which can be seen by the emerging gap between Energiekontor and Encavis as of 2021. The steep increase of the stock price is due to the record-breaking performances in 2021 and 2022. Energiekontor increased its EBT from EUR 9.6m in 2018 to EUR 31.2m (2021) and 63.0m (2022). Between

2018 and 2022 Energiekontor achieved an EBT growth of 26.3% (CAGR). According to Energiekontor's management, for 2023 a further increase in EBT of 10-20% is expected.

FIGURE 7: HISTORICAL STOCK PRICE PERFORMANCE

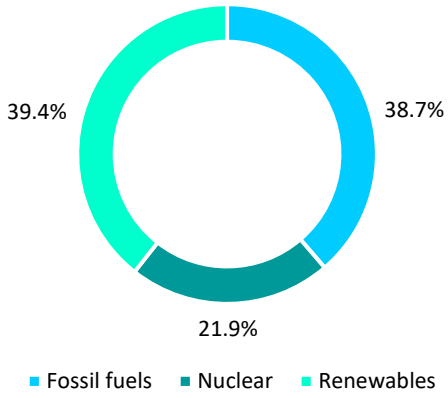


2.4 Market Environment & Outlook

The current market environment for renewable energies continues to be determined primarily by two fundamental factors (1) the ongoing war in Ukraine and (2) the international goal to counteract climate change. In both cases, the expansion of renewable energies, particularly wind power and solar power, is a core element of international and national economic and energy policy strategies.

As a result, worldwide governments have initiated numerous measures and laws to improve the regulatory and economic environment for renewable energies and accelerate their expansion in the coming years. For example, 45% of energy in the EU is planned to come from renewable energy sources by 2030, instead of the previously planned 40%. In 2022, a share of 39.4% of total electricity generation was already achieved in the EU, see Figure 8 (Council of the European Union, 2023). Furthermore, long-term growth is secured by the goal of the EU to be climate neutral by 2050. Regarding the market environment for the United States, with the Inflation Reduction Act a comprehensive package of measures and subsidies for renewable energies was launched in 2022. One of the goals of the inflation reduction act is to reduce carbon emissions by 40% until 2023 (International Energy Agency, 2023).

FIGURE 8: EU ENERGY MIX 2022



Despite the positive market environment for renewable energies, the entire industry is also facing challenges which can partially be attributed to the war in Ukraine. The conflict has led to massive distortions in the international raw materials and energy markets. This resulted in significant price increases for wind turbines, solar modules, electrical components, transportation and logistics costs, accompanied by an emerging trend for deglobalization. However, the initial inflationary shock on the markets eased further in 2023. In particular, prices fell for PV modules and components, but also for transportation costs.

Additionally, long supply periods can be expected for many important components and systems, e.g. high voltage transformers. Therefore, increased planning uncertainty and delays in the realization of renewable energy projects are to be expected. For example, the delivery time of a high voltage transformer is currently estimated at approximately 18 months[6]. Despite these challenges, the market environment and outlook for renewables is still positive, with the International Energy Agency (IEA) expecting the expansion of renewable energies to be around a third higher in 2023 than in the previous year.

[6] Based on procurement experience for Italian solar and German battery storage projects (March 2024)

3 Energiekontor AG sum-of-the-parts Valuation

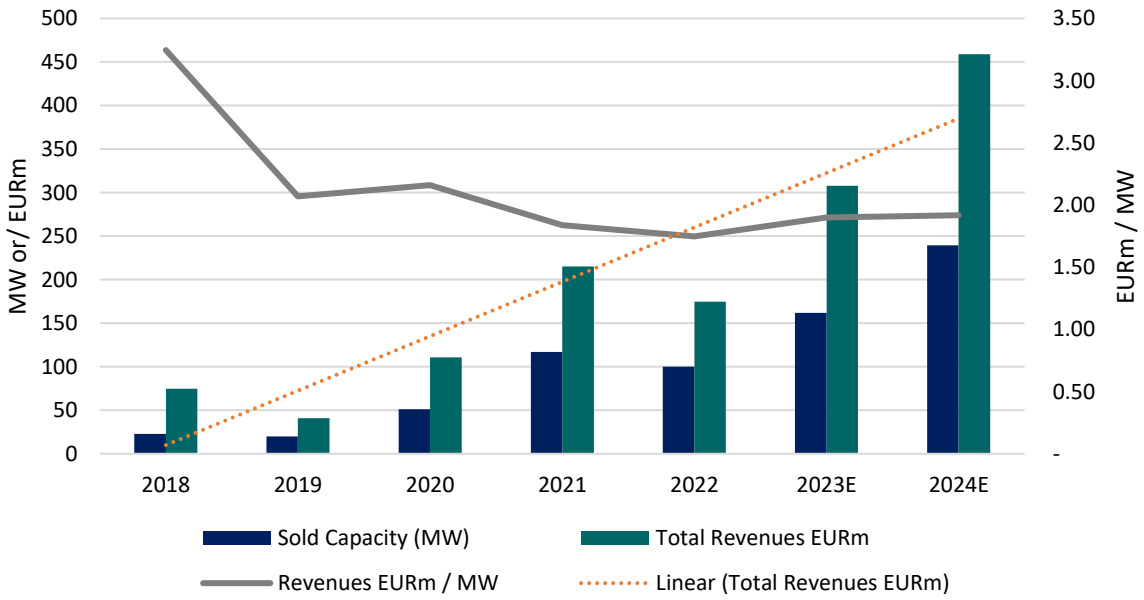
3.1 Revenue Analysis

3.1.1 Project Sale – Historical Revenue Growth

Energiekontor's revenues grew in the project sale segment between 2018 and 2022 with a CAGR of 23.7%. Figure 9 shows a revenue spike in 2021 with EUR 215m in revenues, followed by a decline in revenues in 2022 to 175m, due to a lower capacity of sold projects. In 2020, solar and wind parks with a total capacity of 51.2 MW were sold, in 2021 a total of 117 MW and in 2022 a total of 100 MW, with an average achieved price of EUR 1.92m / MW.

For the year 2023 Energiekontor already confirmed that the company will continue its growth course, as solar and wind parks with a total volume of 116 MW were sold until the end of Q2 2023 and it was announced in a press release in December 2023 that a further wind park with a capacity of 46 MW was sold, which corresponds to a total transaction volume of 162 MW. In summary, the business segment is highly volatile. Nevertheless, a clear growth trend can be seen with enormous growth potential.

FIGURE 9: REVENUE GROWTH PROJECT SALE



3.1.2 Project Sale – Revenue Forecast

For the forecast of revenues in the project sale segment, it is assumed that a total of 162 MW will be sold in 2023 as published by Energiekontor. In 2021 and 2022, the average revenue for sold projects was EUR 1.79m / MW. Sales multiples of solar and wind plants are changing in line with power price forecasts, construction and general CapEx costs and further

macroeconomic factors such as inflation and interest rates. Platforms like Inframation release sales multiples of projects. However, it is not possible to use this data for an accurate forecast, as many relevant details of the deals are not known, e.g. the remaining operational life of the project, financing which is in place, available PPAs or the potentially paid premium above the fair equity value. Accordingly, the best estimate for the revenue forecast of the project sale segment is to assume the currently achieved multiple of EUR 1.79m / MW. As the development of the aforementioned macroeconomic factors is uncertain, except for the decline in capture prices, the valuation of EUR 1.79m / MW is reduced by 2% p.a. to account for the capture price decline. Nevertheless, the resulting sales multiple is approximately stable at EUR 1.91m / MW, due to the positive effect of the assumed long term inflation rate of 2% p.a. which is offset by the annual capture price effect of 2%. Please refer to Figure 11 for further details regarding the capture price effect.

The second item that needs to be forecasted is the capacity in MW that the company can develop annually until it reaches a saleable status. The forecast of the sellable capacity is based on the in chapter 2.2.1 presented pipeline of 10,030 MW, of which 256 MW are under construction and 610 MW have received all relevant permits to begin construction.

It is assumed that the saleable capacity (MW) will grow annually at a CAGR of 47.7%. However, this growth rate is reduced annually by 30%, as the company's strategy is to grow only organically. Furthermore, the growth rate must naturally fall with an increasing company size. A growth rate of 2% will therefore be achieved in 2033.

The revenue growth rate of the project sale segment from 2023 until 2032 of 16.2% (CAGR) is supported by the EU's target for the build out of renewable energies. The energy sector accounts for over 75% of the EU's greenhouse gas emissions. Elevating the proportion of renewable energy in various economic sectors is therefore pivotal in achieving the objective of reducing net greenhouse gas emissions by at least 55% until 2030, with a transition into a climate-neutral continent by 2050. Thus, it is evident that there will be a high demand for Energiekontor's assets for the next two decades (European Commission, 2023). However, the main bottleneck for Energiekontor could be a lack of capital and/or skilled employees to grow accordingly.

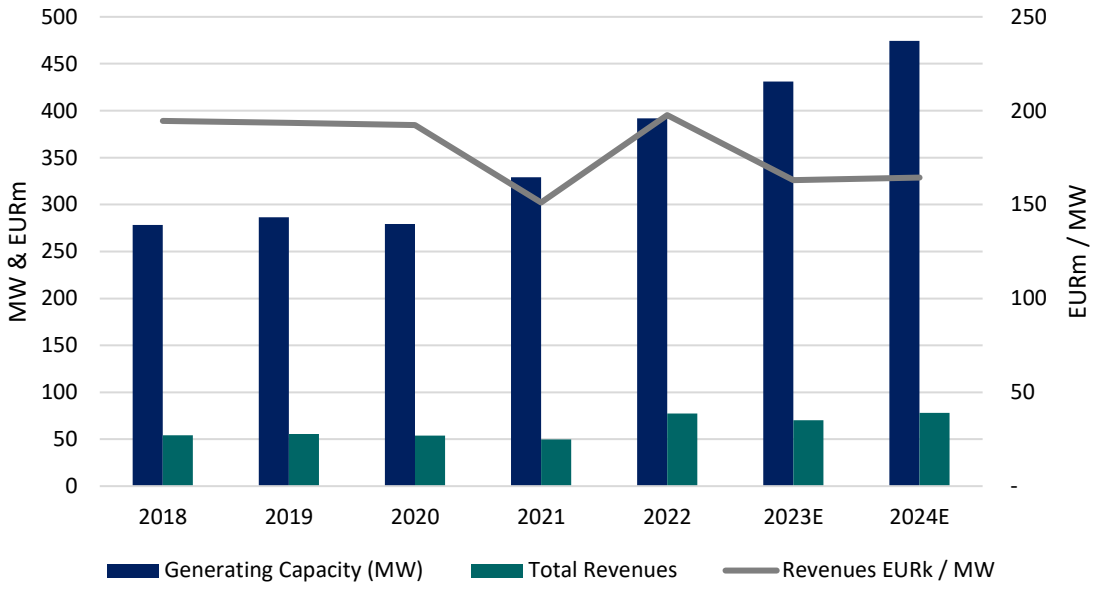
3.1.3 Power Generation – Historical Revenue Growth

According to Energiekontor's strategy, it is envisaged to sell 50% of the developed projects and maintain the remaining 50% within the company as power generating assets. Considering the revenue analysis of the project sale segment and the related capacity growth, it is clear that the

company didn't follow its strategy over the last years. Figure 10 shows an almost stable capacity in the power generation segment from 2019 until 2020. After three years of stagnation the capacity increased in 2021 and 2022 by each c. 50 MW.

The revenues per MW are also stable at c. EUR 190k / MW from 2019 until 2021. In 2021 the revenues per MW decreased to c. EUR 150k / MW. According to Energiekontor's annual report this decline was due to an exceptional low wind yield. The CAGR of the revenue growth between 2018 and 2022 is 9.4%.

FIGURE 10: POWER GENERATING CAPACITY & REVENUES

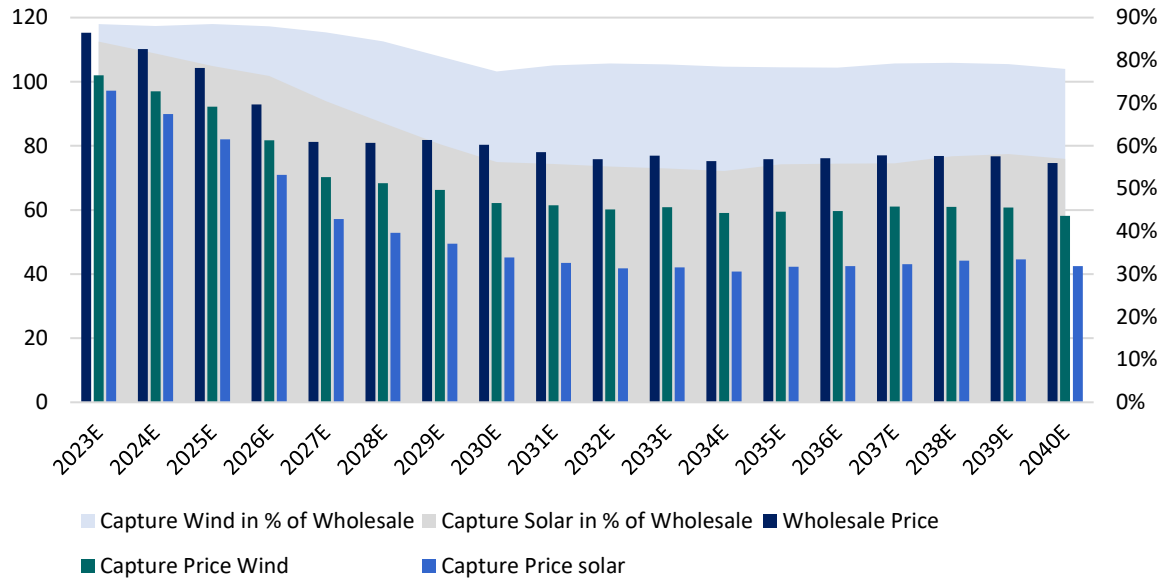


3.1.4 Power Generation – Revenue Forecast

Forecasting revenues for the electricity generation segment is particularly difficult, as Energiekontor deviates from its own target of adding 50% of the projects or capacity envisaged for a sale to its own power generating portfolio each year. It is therefore assumed that the capacity of the power generation segment will continue to grow at a CAGR of 10% until 2028 and that the portfolio will therefore be further expanded. This assumption is supported by the 256 MW capacity currently under construction and the additional 610 MW for which the construction works can begin. Based on the growth assumptions, the capacity needs to grow from 392 MW in 2023 to 631 MW in 2028, which corresponds to a growth of c. 48 MW per year. This growth assumption is further supported by the added capacity in 2021 and 2022 of each 50 MW. From 2029, it is assumed that the power generating portfolio will not be expanded any further. This is due to the fact that Energiekontor only published a strategy up to 2028, with the clear aim to further expand the power generating capacity.

Based on the respective capacity, the annual revenues are forecasted at EUR 183k / MW. However, the revenues per MW of capacity are reduced by 2% p.a., based on the assumed capture price effect which will lead to decreasing power prices. Please refer to Figure 11, which shows the German wholesale price as well as capture price forecast for solar and wind power (Real, 2023)[7]. The figure clearly shows that the prices for solar and wind power decrease significantly until 2040. Solar capture prices decrease to c. 57% of the wholesale price and wind power respectively to c. 78%. The decline of solar power prices is more severe, as solar plants can't produce energy at night. Subject to enough wind, a wind plant can produce power at day and night, which explains the lower capture effect. In the revenue forecast the negative capture effect is contradicted by the assumed inflation of the power prices, which assumes as of 2025 the ECB long term inflation rate of 2%. Resulting in stable revenues of c. EUR 114m after 2028.

FIGURE 11: WHOLESALE AND CAPTURE PRICES GERMANY



The forecast of the power generation segment is conservative. However, due to the uncertainties in the energy market that are mainly related to the declining capture prices, this forecasting approach is deemed appropriate. Currently it is being observed in power markets that with an increasing capacity of solar and wind power, at peak production times, e.g. when the sun is shining or the wind is blowing, the power prices tend to decrease which reduces the profitability of generating renewables projects (Reuters, 2023). It is expected that this so-called cannibalization effect will continue over the next years with the needed build out of renewable

[7] Baringa Power Price forecast Germany for Q4 2023

energy projects. Therefore, an aggressive forecast of the build out of Energiekontor's power generating portfolio would be subject to high uncertainty.

3.1.5 Services – Historical Revenue Growth & Revenue Forecast

Energiekontor's service segment plays with a revenue share of 3.4% in 2022 only a minor role. Furthermore, the segment hasn't shown a continuous growth pattern over the last 5 years. According to Energiekontor the expected revenues for 2023 will be close to the revenues of 2022. The company's growth plan until 2028 also does not mention the service segment. Therefore, a growth rate of 3%[8] is assumed for the explicit period until 2040.

3.2 Operating Expenses

The operating expenses were measured as a percentage of revenues for the following cost categories: material costs & services, SG&A, and other costs. Due to the properties of the different business segments, each of the three OpEx categories is playing a different role in the income statement of the respective business segment. Please note that the OpEx assumptions of the service segment are not explained in further detail, due to the negligible size of the segment.

3.2.1 Project Sale

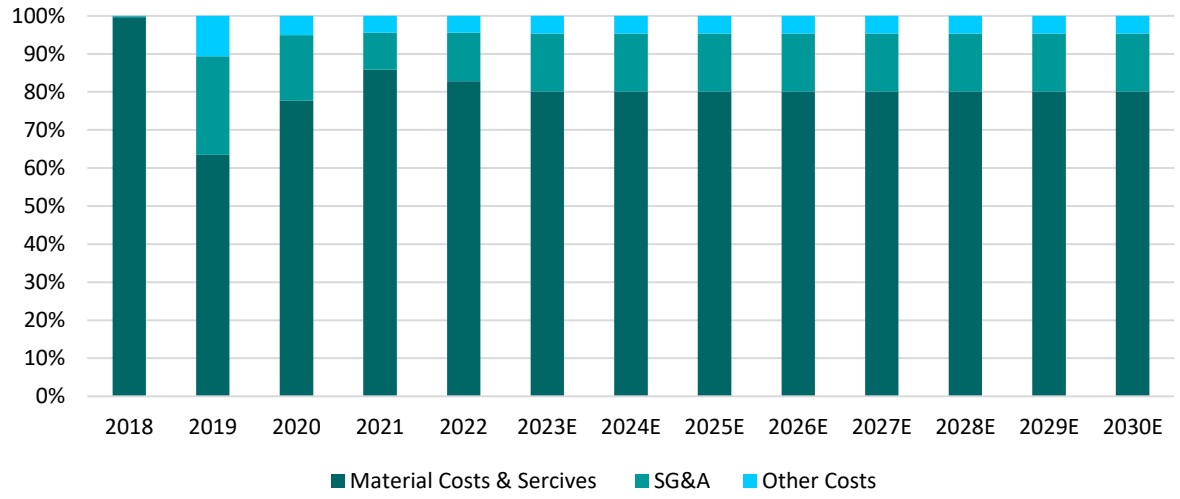
For the project sale segment, the main cost item is materials & services, covering mainly costs for the development and construction of the assets. From 2020 until 2022 the average cost for materials & services was at 64.4% and in 2019 the cost was at c. 73.5%. Considering the current trend of deglobalization and the fact that most technical components that are required for the construction of power plants come from non-European countries, an increase of the materials & services costs to 69.0% of revenues is assumed. The higher costs are based on the assumption that a replacement of cheap technical equipment with more expensive equipment will reduce the margin, e.g. in 2022 87% of the solar modules in Germany were imported from China (Statistisches Bundesamt, 2023).

The SG&A expenses were between 2018 and 2022 on average at 11.4% of revenues, excluding an outlier in 2019. For the forecasting period an average of 11.4% is assumed, plus an additional factor of 15% which shall capture increasing wages due to a lack of skilled workers as well as foreseeable higher contributions for the underfunded German state pension. The resulting cost

[8] Including inflation

for SG&A is 13.1% of revenues. Especially with the retirement of the German baby boomer generation it can be expected that the war of talents will intensify even further. Other costs were stable over the last three years with on average 3.6% of revenues, therefore, the forecast assumes 4% of revenues.

FIGURE 12: OPEX – PROJECT SALE



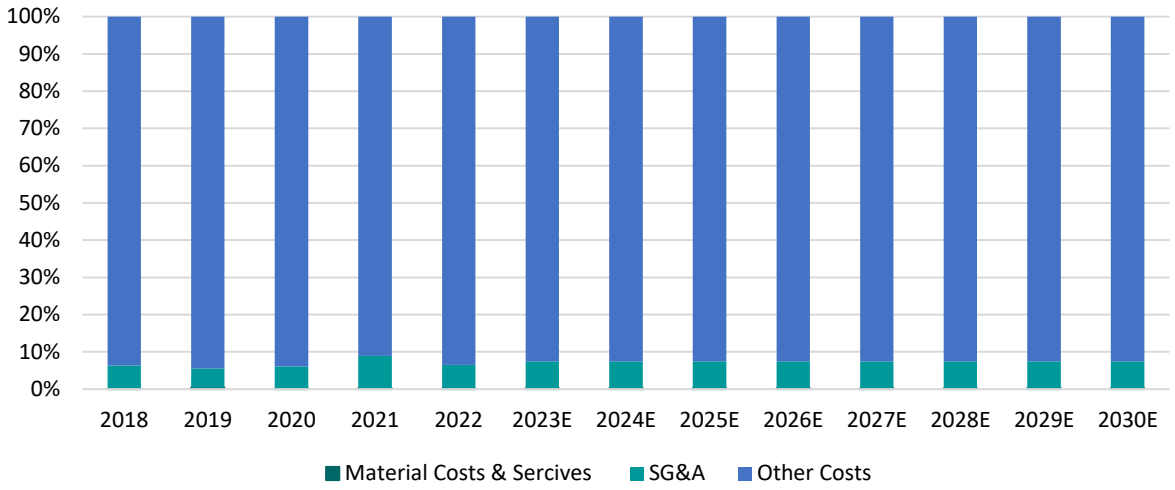
3.2.2 Power Generation

Due to the capitalization of the development and construction expenses of the power generation segment, the material costs & services are close to nil. The remaining positions are SG&A as well as other costs, whereby the SG&A costs are also low with on average 1.6% of revenues (2018 – 2022). The historical average of other costs amounts to 25.8% (2018-2022). The main items which are covered by the other costs position are repair and maintenance works of the power plants, land lease costs or administration and audit costs.

The OpEx for the operation of the power plants are low in direct comparison to revenues. This is due to the fact that infrastructure projects such as solar and wind parks initially require high CapEx for the construction, but during operations the operating costs are relatively low. This results in 2022 in an EBITDA margin of 77.5%. For direct comparison, the EBITDA margin of the project sale segment is at 20.1% for the same year.

For the forecasting period the historical average of SG&A expenses of 1.64% of revenues is considered, plus an increase of 15%, similar to the applied methodology of the project sale segment. Resulting in 1.89% of revenues as SG&A expenses. The other costs are forecasted with 27.0% of revenues, which is also the historical average (2018-2022) plus a factor of 5%.

FIGURE 13: OPEX – POWER GENERATION

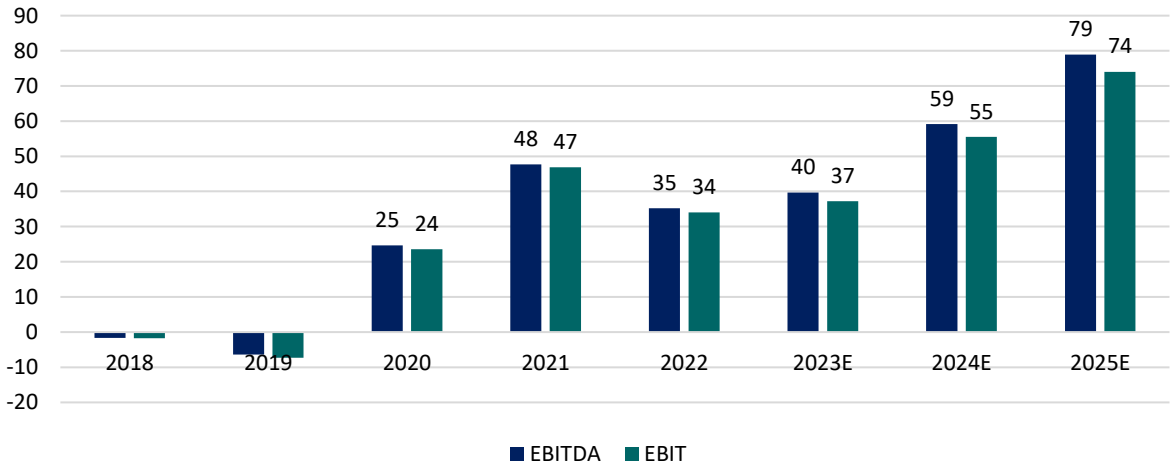


3.3 Profitability

3.3.1 Project Sale

Figure 14 displays the historical and forecasted EBITDA as well as EBIT margin of the project sale segment. Prior to 2020 (2018 & 2019) the EBITDA and EBIT of the project sale segment were slightly negative, due to high costs for materials & services. The costs for materials & services amounted in 2018 to 80.8% of revenues, compared to only 66.1% in 2020.

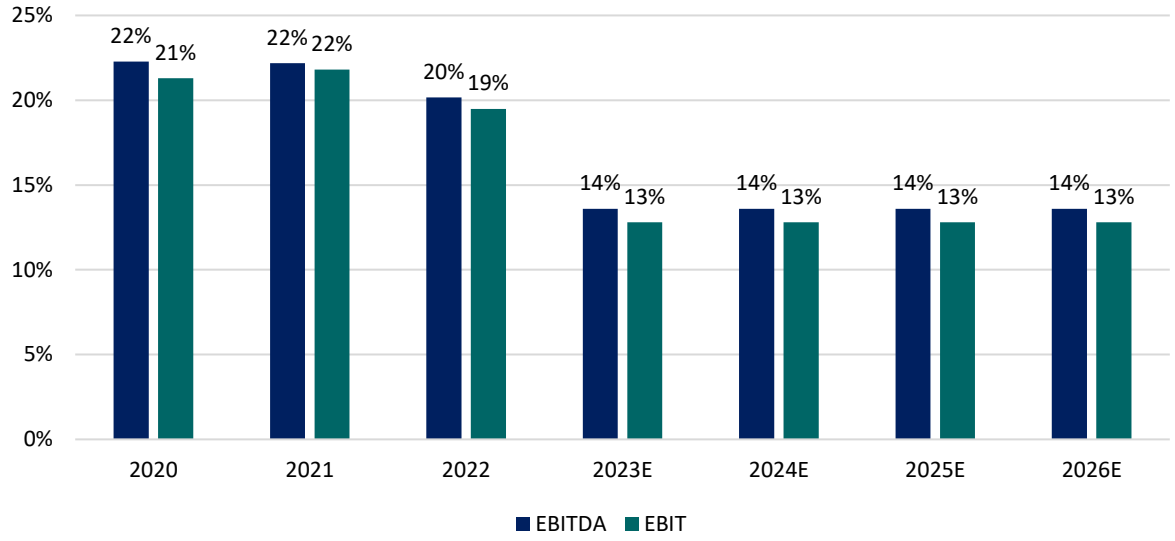
FIGURE 14: PROJECT SALE EBITDA & EBIT DEVELOPMENT



Energiekontor was able to reduce its materials & services cost significantly by increasing the size of the project sale segment and benefiting from economies of scale, e.g. cheaper costs for technical equipment and in general supplier contracts. This positive improvement of the cost structure has led to a stable EBITDA margin of c. 20%, with an average of 21.5% between

(2020-2022). The same applies for the EBIT margin, with an average of 20.9% between 2020 and 2022.

FIGURE 15: PROJECT SALE PROFITABILITY MARGINS

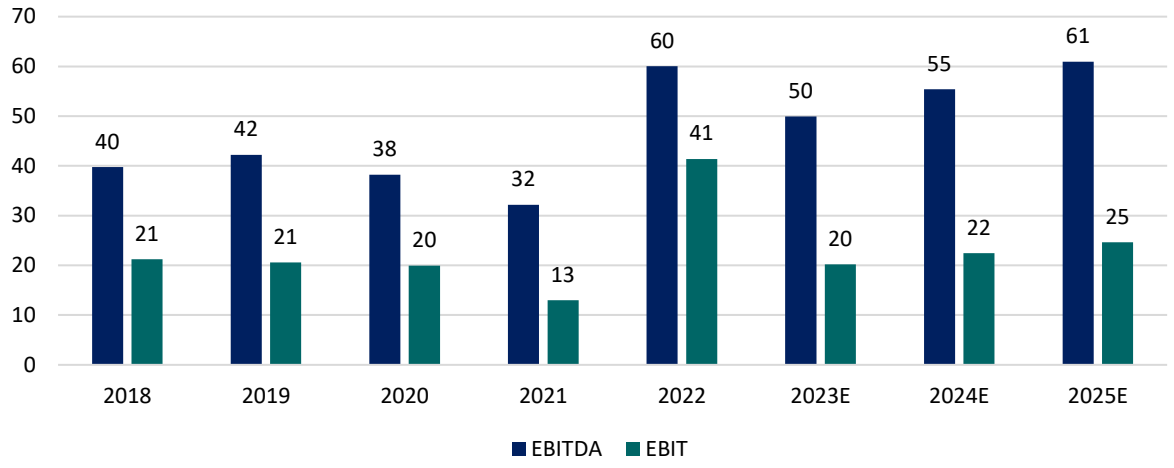


Nevertheless, the forecasted EBITDA and EBIT margin are both decreasing by c. 6 percentage points, due to the expected increase in operational costs, in particular in material and service costs as well in SG&A. The decrease in profitability is depicting the current environment of the construction and manufacturing industry which is hit by rising costs - "*Solar PV costs jumped up 23% from 2022 to 2023, a trend seen across the renewables space*" (Forbes, 2024). In case that materials and services do not increase in the forecasted magnitude, the profitability would significantly increase. Therefore, a sensitivity analysis shows the effect of lower material and service costs on the share price.

3.3.2 Power Generation

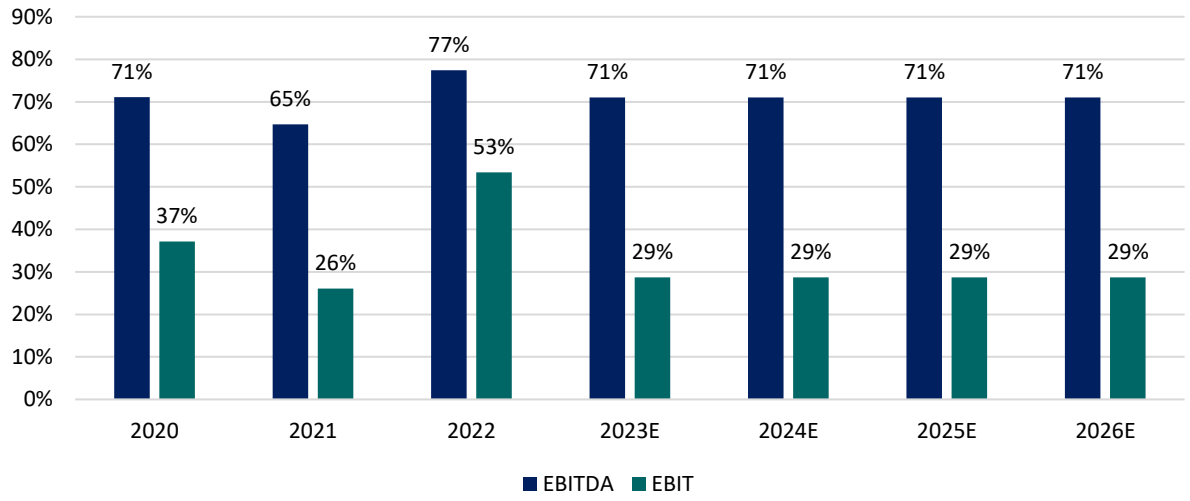
As one of its main characteristics, the power generation segment has shown a stable EBITDA margin over the last 5 years, with an average EBITDA margin of 72.5% and EBIT margin of 34.8% (2018-2021). The EBITDA margin remains for the forecasting period at a stable level of 71.0%. The slight decrease in margin is due to an anticipated increase in OpEx, similar to the project sale segment. However, as described, the operational expenditures have a minor impact on the power generation segment, in comparison to the project sale segment.

FIGURE 16: POWER GENERATION EBITDA & EBIT DEVELOPMENT



The forecasted EBIT margin of 29% is below the historical average of 34.8% (2018-2021), which is due to increasing D&A expenses.

FIGURE 17: POWER GENERATION PROFITABILITY MARGINS



3.4 Discount Rate (WACC)

Due to the different company segments with differentiating risk profiles, the WACC was derived for each company segment individually. The segment with the lowest risk profile is the power generation segment, especially in direct comparison with the project sale segment. As soon as a solar or wind park generates electricity, the risk profile is relatively low. The only remaining risk factors are fluctuating production or power prices, latter can, be mitigated by PPAs.

The risk profile of the project sale segment is higher, due to the fact that the projects needs to be developed, and in many cases, it can come to delays in the permitting process or to general issues, e.g. a permit is not granted, or the grid connection won't be available in the next 2-3 years. Resulting in the case that the development or construction is heavily delayed, accompanied with additional costs. In particular cases it can come to the case that the project needs to be abandoned, even if significant amounts of resources were invested.

3.4.1 MRP

The expected MRP of 6.62% has been assessed based on the average MRP of the SDAX (6.30%) and MDAX (6.94%) between 2004 and 2023[9]. For the historical risk-free rate the Euribor 12M was considered. The SDAX and MDAX were chosen as Energiekontor is part of the SDAX and might join the MDAX if the company continues its growth track. The companies which are part of the chosen indices also reflect an appropriate market capitalization in comparison to Energiekontor, as companies that are part of the larger DAX40 have a significantly higher market capitalization, ranging from EUR 6 to 200b (boerse.de, 2024a).

3.4.2 Cost of Equity

The risk-free rate was calculated based on the German government bond yield curve, with a maturity of up to 30 years. Due to the long forecasting horizon, the risk-free rate is variable and decreases over time in line with the declining yield curve of the German government bond. Please note that the model considers for each forecasting year the respective forecasted risk-free rate, which results from the yield curve of the German government bond. The average risk-free rate for the first 5 forecasting years is 2.45% and for the remaining forecasting period of 25 years 2.22%. However, these average rates are not applied, as for each year the respective risk-free rate is considered.

For the beta derivation, a regression is applied with daily returns of the SDAX and Energiekontor stock, considering returns from 2019 until 2023, which results in a levered beta of 0.61, respectively an unlevered beta of 0.22. Based on the beta of 0.61, a MRP of 6.62% and a risk-free rate of 3.27% in 2024, the CoE in the first forecasting year of the DCF is 7.8% and the average CoE over the whole forecasting period is 6.8%[10]. However, the average CoE is

[9] Based on annual returns

[10] The CoE also incorporates a country risk premium of 0.50% which covers the potential risk of legislative changes in e.g. taxation or depreciation, which can have an immense impact on the valuation of a solar or wind park

not applied, as for each year the respective CoE is considered. Please note that the derived CoE is only considered for the WACC calculation of the power generation segment as well as the service segment.

Due to the significantly higher risk which is attached to the development process of solar and wind projects as well as the volatility of the project sale segment in general, a fixed CoE of 11.0% is applied. This CoE is based on observed financing costs in the renewable energy industry for early to late-stage development projects.

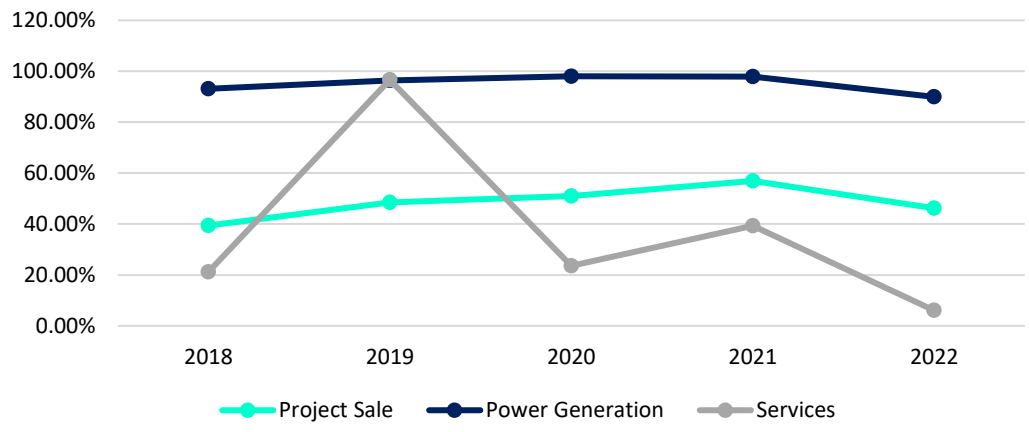
3.4.3 Cost of Debt

Energiekontor has publicly traded corporate bonds which were issued in March 2016 as well as in November 2017, with an issued amount of EUR 12m and EUR 23m respectively. The average YTM of the bonds is 5.35% (January 2024). Considering the risk-free rate of 2024 of 3.27%, the spread of the CoD is 2.08%. The CoD is forecasted based on the spread of 2.08% and the respective annual risk-free rate. In the first forecasting year of 2024, the CoD is at 5.35% and decreases until 2040 to 4.47%. The for the post-tax CoD applied marginal tax rate is 29.8%, which is based on the German corporate income taxation. Please note that the marginal tax rate was also applied for the derivation of the NOPATs.

3.4.4 WACC

Based on the derived CoE and CoD the WACC of the three company segments is computed. Figure 18 shows a stable capital structure for the project sale as well as power generation segment. Solely the capital structure of the service segment is volatile, which is related to the small amounts of debt and equity. Therefore, small changes in debt or equity can significantly affect the capital structure of the service segment.

FIGURE 18: DEBT TO ASSETS RATIO



The resulting WACC for the project sale segment for the first forecasting year is at 7.3% and declines until 2040 to 7.0%. For the power generation segment the WACC is at 4.0% in 2024 and declines until 2040 to 3.3%. The WACC of the service segment is in 2024 at 6.7% and declines until 2040 to 5.9%.

3.5 Capital Structure

Figure 20 clearly shows the financing strategy of the power generation segment with an equity share of only 8%[11]. Such a high leverage is solely possible as banks are willing to finance up to 70-80% of the required investment volume of a power generating plant, based on industry experience. In addition to the financing at project level, the company has repetitively been able to issue corporate bonds on the market. With the raised funds at company level, Energiekontor can contribute the required equity funding for the power generating plants of the power generation segment and thereby increases the leverage of the segment to >90%.

Due to the risk characteristics of the project sale segment, the equity share of the segment is significantly higher at 43%, see Figure 19. Energiekontor's strategy to use the cashflows of the power generation segment to fund the risky development of power plants allows the company to avoid costly external financing for the risky project development. In addition, the raised debt via bonds on corporate level can also contribute to the funding of the segment.

All in all, Energiekontor's well diversified financing strategy, which is based on organic growth, is positioning the company well and reduces the exposure to macroeconomic developments such as rising interest rates. The willingness of banks to finance the power plants at project level as well as the demand for Energiekontor's corporate bonds, shows that investors are willing to finance Energiekontor and thereby allow the company a high level of debt.

FIGURE 19: PROJECT SALE (2022)

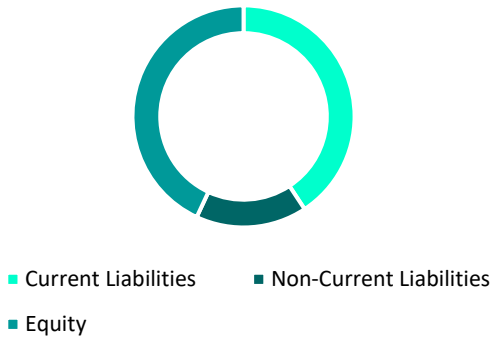
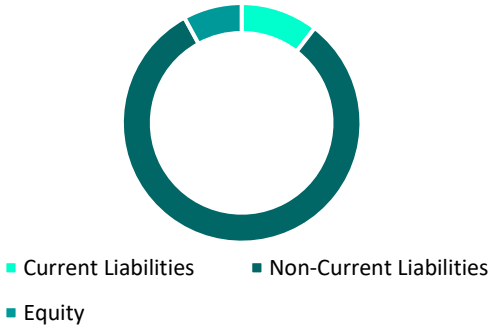


FIGURE 20: POWER GENERATION (2022)



[11] Based on book values

3.5.1 Net Debt

As the capital structure of the various segments differs considerably, net debt is calculated individually for each segment, based on book values. In addition to the available cash, cash equivalents are also considered for the derivation of the total cash position. Resulting in a cash position of EUR 66m for the project sale segment and EUR 11m for the power generation segment.

As the power generation segment is higher levered than the project sale segment, the debt position of EUR 194m of the power generation segment is significantly higher than the debt position of the project sale segment of EUR 33m. The resulting net debt position per share is EUR 2.4 for the project sale segment and EUR (13.2) for the power generation segment.

3.6 PP&E, CAPEX and D&A

3.6.1 PP&E

For the analysis of the assets of the segments and the associated depreciation and amortization, the segments are considered in isolation. Due to the different areas of activity of the segments, there are clear differences in the current and non-current asset balance of each segment.

As soon as it is determined that a solar park or wind farm shall be part of the power generating portfolio, the asset is recognized as a non-current asset (PP&E) at manufacturing cost. By contrast, projects that are deemed for a sale are also recognized at cost, however as current assets (Inventory). As a result of this accounting approach, 99.89% of the company's non-current assets of EUR 307.8m were allocated to the power generation segment as PP&E in 2022. According to the assets overview, this mainly relates to the power plants.

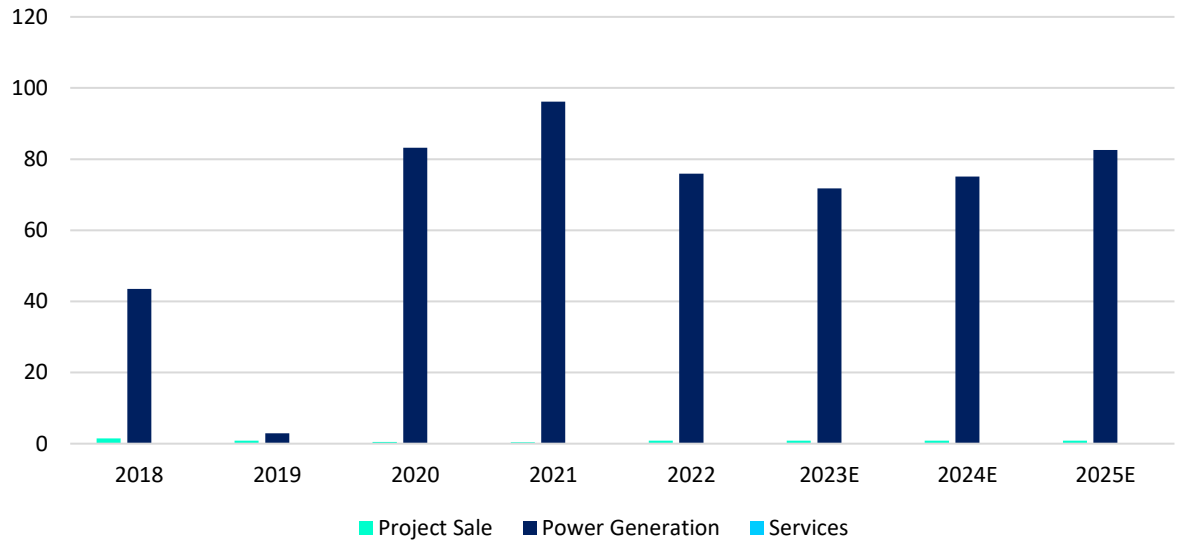
A different picture emerges for current assets. A total of 86% of the current assets correspond to assets of the project sale segment. Please note that Energiekontor's intangible assets are not analyzed in further detail, as the balance of intangible assets is with EUR 0.2m negligible.

Tangible assets are valued at acquisition or production cost, less scheduled depreciation for wearable items, and if necessary unscheduled depreciation takes place. Technical equipment and machinery (wind and solar parks) are depreciated over 10 to 30 years, while operating and office equipment is generally depreciated over 3 to 13 years. As the assets mainly consist of technical equipment, a depreciation period of 30 years is assumed, which is approximately in line with the industry standard for the operational life of a solar or wind park.

3.6.2 CapEx and D&A

The forecast of the CapEx and D&A is mainly focusing on the power generation segment, as investments in the project sale segment are categorized as current assets (WC) and not as CapEx. Please refer to Figure 21 which clearly depicts that only the power generation segment requires considerably high CapEx investments. Nevertheless, the presented methodology for the forecast of CapEx and D&A was applied for all segments.

FIGURE 21: CAPEX PER SEGMENT

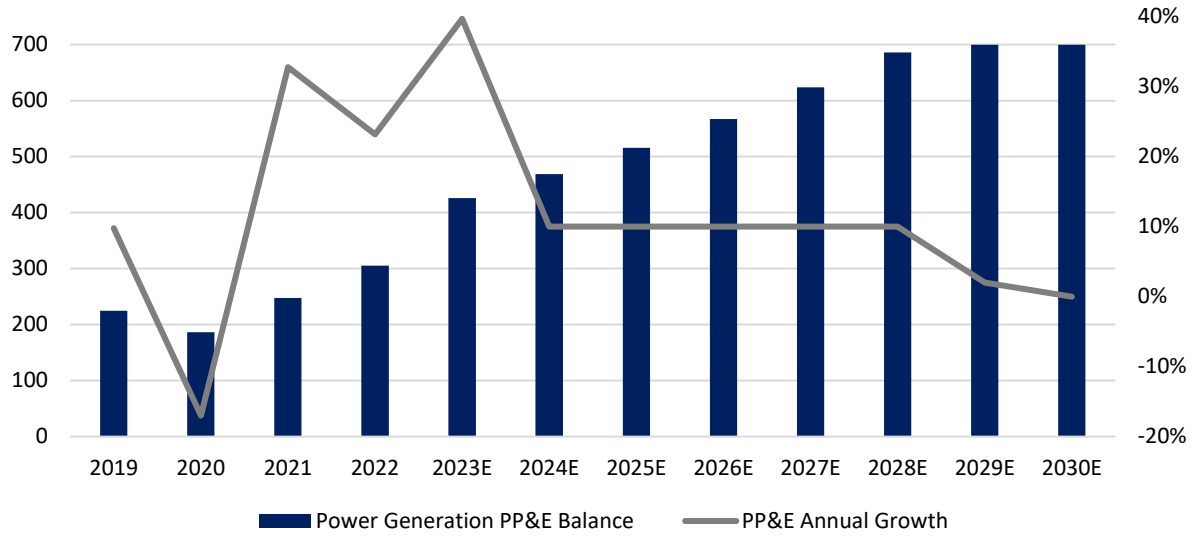


The PP&E is forecasted based on the average PP&E to Revenues ratio of the respective segment. To forecast CAPEX and PP&E, the following formula is applied.

$$(16) \quad CAPEX_t = PP\&E_t - PP\&E_{t-1} + D\&A_t$$

For the power generation segment the PP&E balance is on average 4x higher than the respective annual revenues. Considering Energiekontor's growth plans for the segment until 2028, a multiple of x5 is assumed, to support the growth of the segment with higher CAPEX investments to increase the capital stock. After the year 2028 it is assumed that the company maintains its PP&E balance by only reinvesting the annual D&A amount which results in a constant PP&E balance.

FIGURE 22: NET PP&E BALANCE FORECAST FOR POWER GENERATION SEGMENT (EURM)



3.7 Net Working Capital

The forecast of the NWC is of particular importance, as the projects intended for a sale are recognized at cost as inventory. Therefore, there is a significant correlation between the NWC and sales in the project sale segment. For the years 2018 to 2022, the correlation between NWC and sales amounted to 78%. For the power generation segment the correlation amounts for the same period to only 18% and for the service segment to 90%.

The NWC is computed as the delta of current assets and current liabilities. The current assets are defined as the sum of inventory and receivables, and the current liabilities as the sum of current financial liabilities (short term loans/debt), payables and other liabilities. Short term debt is not excluded from the working capital calculation, as a large proportion of the current assets of the project sale and power generation segment is financed via short term debt. Excluding short-term debt would result in an underestimation of the required net working capital needs.

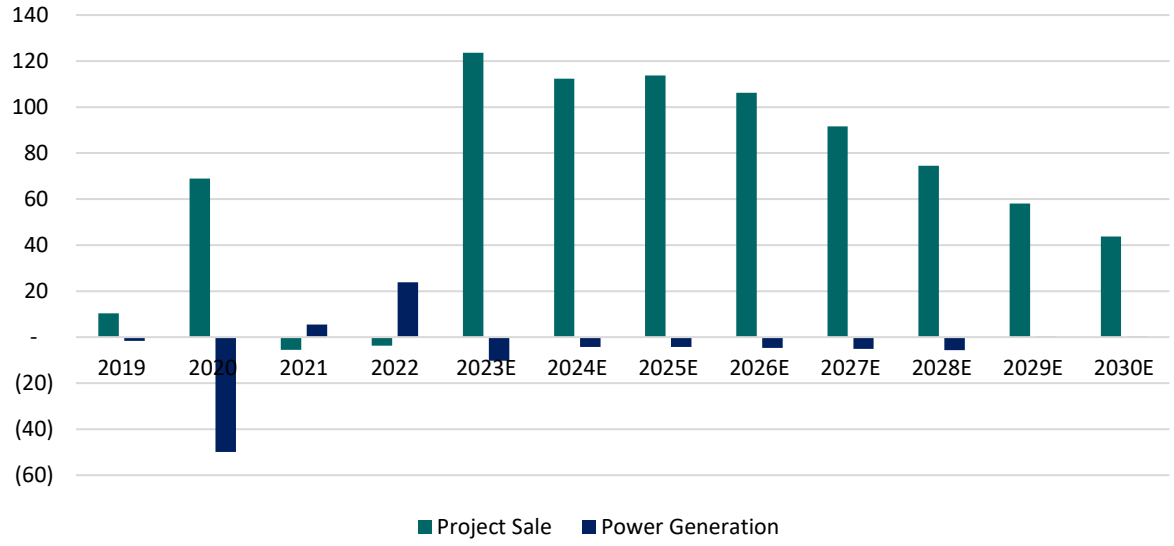
TABLE 3: AVERAGE (NWC / REVENUES)

Average (NWC / Revenues)		
Project Sale	%	74.3%
Power Generation	%	(55.0)%
Services	%	16.0%

In the next step the average (NWC / Revenues) was computed for all company segments, considering the period 2018 to 2022. Tabel 3, clearly shows that the project sale segment has

high working capital needs, as all projects which are envisaged for a sale are recognized as inventory on the company's balance sheet. On the other hand, the power generation segment records a negative NWC, which is caused by the high level of current liabilities. Based on the derived average (NWC / Revenues) multiples, the forecasted annual revenues are multiplied with the respective multiple to obtain the forecasted NWC.

FIGURE 23: FORECASTED NWC DELTA (EURM)



The NWC delta of the project sale segment is expected to increase considerably, due to the underlying assumption that the company wants to accelerate the growth of this segment over the next years. Once the project sale segment reaches its mature stage in 2033, the NWC delta stabilizes around c. EUR 17m. For the power generation segment a similar development is expected, with a continuously negative NWC delta, however stabilizing once the segment reaches its expected steady state in 2029.

3.8 Terminal Growth

Since all segments are not yet in a steady state, the explicit forecast period is from 2024 to 2039. As the valuation date is the 1st January 2024, the first discounted cash flow is for the year 2024. Over the forecasting period the growth rate for all segments is converting towards the long-term growth rate of 2% p.a., which is also the long-term inflation target of the ECB (European Central Bank, 2024).

It is assumed that the project sale segment grows after 2032 with the long-term inflation rate of 2% p.a., as the extensive buildout of the renewables is expected to partially saturate the market. For the power generation segment, it is assumed that the long-term growth rate is

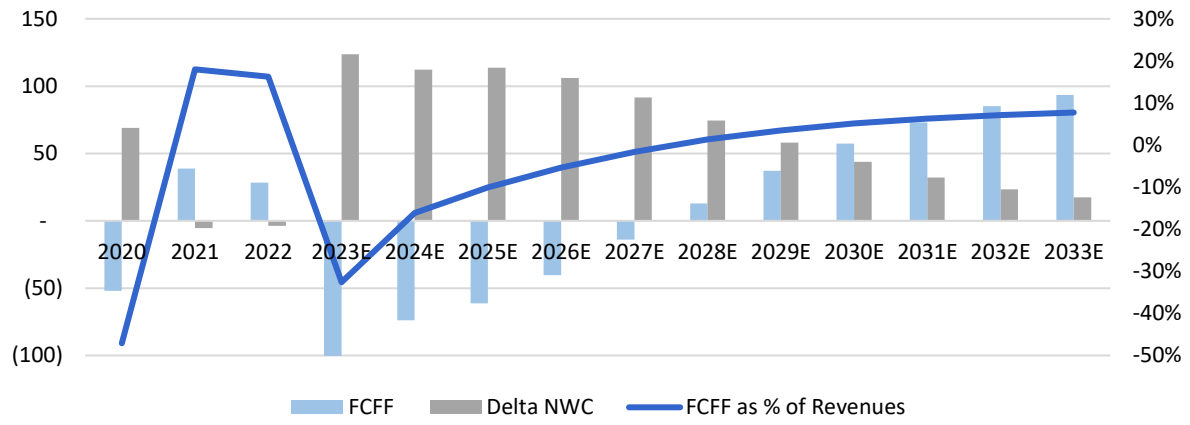
achieved in 2029, as it is unclear whether the company will further increase its CAPEX in the power generation segment.

3.9 DCF Valuation

3.9.1 Project Sale

The historical FCFFs of the project sale segment show a volatile pattern, which is due to the volatile NWC investments rather than the actual revenues. For instance, the NWC investment amounted to EUR 69m in 2020 and EUR (6)m in 2021, which explains on the one hand the negative FCFF in 2020 and on the other hand the positive FCFF in 2021. Due to the growth strategy of the company until 2028, it is assumed that the NWC investments will increase during the forecasting period, however, the NWC investments convert from 2023 until 2028 to a level which allows the business segment to achieve positive FCFFs as of 2028. Figure 24 clearly depicts how the FCFFs are rising in line with the declining NWC investments.

FIGURE 24: FCFF FORECAST – PROJECT SALE (EURM)



3.9.2 Power Generation

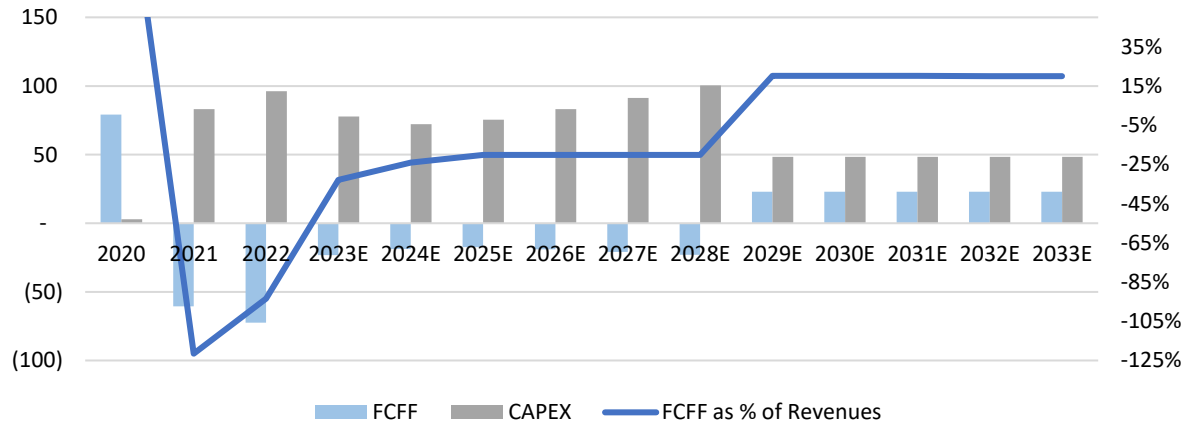
For the power generation segment, the FCFFs are mainly subject to (1) the achieved power prices for the respective year as well as (2) the invested CapEx. An analysis of the historical FCFFs depicts clearly that the CapEx investments are causing negative FCFFs, with the exemption of 2020. In the year 2020, the power generation segment achieved positive FCFFs of EUR 79m as the invested CapEx only amounted to EUR 3m. However, in the following years the CapEx rose which led to negative FCFFs.

According to Energiekontor's growth plan until 2028, it is planned to continue with the extensive CAPEX investments to add more power generating assets to the balance sheet of the

company. Nevertheless, the company needs to generate in the long run positive FCFFs with its power generation segment, which will require the company to reduce its investments into new power generating plants to a sustainable level opposed to the current investment volume which is oriented towards growth. As already explained in previous chapters, it is therefore assumed that the company will from 2029 onwards only maintain its level of power plants (PP&E), which translates into a positive cashflow. As of 2029 the FCFFs remain on a stable level, as the capture effect of 2% offsets the inflation of 2% p.a.

Although the FCFFs of the segment are constant from 2029 until 2040, the terminal value assumes a growth rate of 2%. Based on development of the capture prices, which are expected to stabilize around the years 2030-2040, see Figure 11. The capture prices will reach their low point around 2040 and will not fall any further, as the capacity required for the energy transition will already have been built and will be feeding energy into the grid. Consequently, the FCFFs grow after 2040 with the long-term inflation rate of 2% p.a. as the capture price effect of 2% p.a. is expected to be no longer applicable.

FIGURE 25: FCFF FORECAST – POWER GENERATION (EURM)



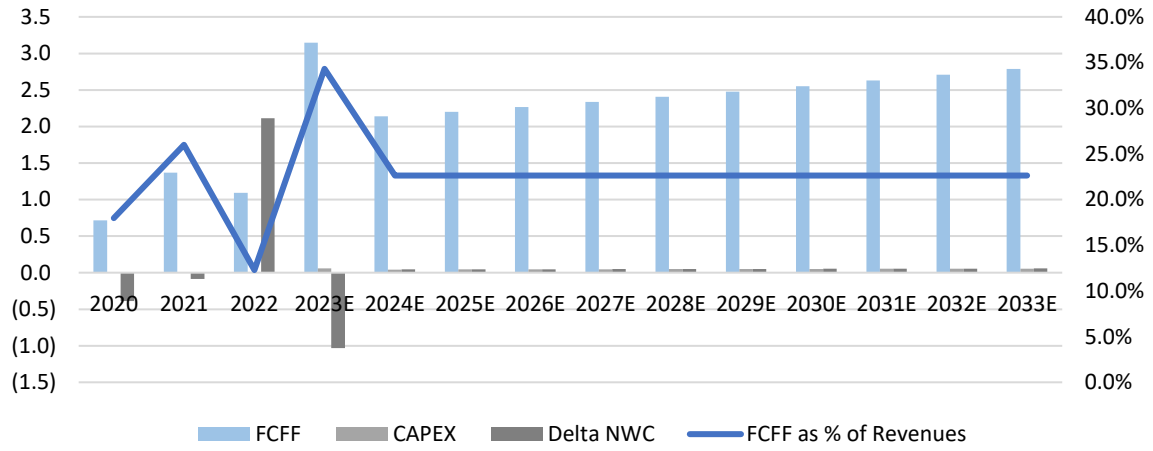
It needs to be emphasized that the forecast of the FCFFs hasn't taken the volatility of power prices into consideration as it is not possible to forecast the potential impact of macroeconomic events such as the current war in Ukraine. For example, a NOPAT of EUR 29m was achieved in the power generation segment in 2022, which was not caused by an extraordinary increase in power generating assets, but by high electricity prices. In comparison, the power generation segment achieved a NOPAT of EUR 9m in 2021. Furthermore, the power generation can also be positively or negatively affected by the wind or sun outcome of the respective year. Nevertheless, in the long term, the yield hours converge to the mean value, but there can be strong annual fluctuations from this mean value as in the year 2021.

3.9.3 Services

In the company's service segment, FCFFs did not increase from 2018 to 2022. However, in 2023 a peak of FCFFs is excepted, which is due to an expected negative NWC delta, following the high NWC investment from 2022 of EUR 2m.

The forecasted FCFFs of the Service segment don't show a significant growth trend over the forecasting period. This is due to (1) the historical revenue growth of the service segment has been low and almost stable with revenues ranging from EUR 4 to 5m[12] from 2018 to 2022 (2) Energiekontor's growth strategy is not mentioning the service segment, which confirms the assumption that this segment won't play a key role in the growth strategy of the company.

FIGURE 26: FCFF FORECAST – SERVICE (EURM)



3.9.4 Equity Bridge

For the derivation of Energiekontor's share price, the three company segments project sale, power generation and services are valued separately. Table 4 shows the equity bridge, which adjusts the enterprise value for the respective cash and debt balance, resulting in the equity value of each segment. The DCF valuation values Energiekontor at a share price of EUR 145.8, clearly showing an upside potential. Furthermore, the analysis shows that the company's value is largely based on the project sale and power generation segment. The project sale segment has the highest share of the total equity value with a valuation at EUR 74.5, which corresponds to a share of 51%. This valuation is closely followed by the power generation segment with a

[12] Except for the year 2022 with revenues of EUR 9m. This spike in revenues is however, due to higher power prices, as many service contracts are also linked to the generated revenues of the respective plant.

valuation at EUR 66.7, which corresponds to a share of 46%. The valuation of the service segment is comparatively insignificant, with a valuation at EUR 4.6 and a share of 3%.

TABLE 4: EQUITY BRIDGE

Total FCFF (PV)	EURm	400
Project Sale	EURm	284
Power Generation	EURm	89.2
Services	EURm	26.8

Terminal Value (PV)	EURm	1,784
Project Sale	EURm	723
Power Generation	EURm	1,024
Services	EURm	37

Enterprise Value	EURm	2,184
Project Sale	EURm	1,007
Power Generation	EURm	1,114
Services	EURm	63

Net Debt	EURm	(150)
Project Sale	EURm	33
Power Generation	EURm	(183.8)
Services	EURm	1

Equity Value	EURm	2,034
Project Sale	EURm	1,039
Power Generation	EURm	929.8
Services	EURm	64

Share Price	EUR	145.8
Project Sale	EUR	74.5
Power Generation	EUR	66.7
Services	EUR	4.6
Shares	#	13,948,909

3.9.5 Sensitivity Analysis

The sensitivity analysis focuses on the terminal growth rate and discount rate. Furthermore, a sensitivity for the material costs & services is shown for the project sale segment. Table 5 shows that the valuation of the project sale segment changes by c. EUR 10 if the material & service costs change by one percentage point, assuming a CoE of 11%. This emphasizes how sensitive the valuation of the project sale segment is in regard to the material & service costs assumption.

TABLE 5: PROJECT SALE MATERIAL & SERVICE COSTS SENSITIVITY

Project Sale - Sensitivity (CoE vs. Material Cost)					
74.5	66%	67%	68%	69%	70%
9.00%	136.6	124.7	112.7	100.8	88.8
10.00%	117.9	107.3	96.7	86.2	75.6
11.00%	102.9	93.5	84.0	**74.5**	65.0

Tables 6-7 show a sensitivity for the terminal growth rate and discount rate. The project sale segment sensitivity focuses on the CoE, as the segment is not highly levered, and the valuation is mainly subject to the CoE. The sensitivity of the project sale segment shows that at a lower terminal value growth rate of (<2%) and a higher CoE (>11%), still result in a considerable equity valuation.

TABLE 6: PROJECT SALE SENSITIVITY

Project Sale - Sensitivity (CoE vs. TV growth rate)					
74.5	0.50%	1.00%	1.50%	2.00%	2.50%
8.00%	92.2	99.3	108.2	119.6	134.7
9.00%	80.5	85.9	92.5	100.8	111.4
10.00%	70.7	74.9	80.0	86.2	93.8
11.00%	62.6	65.9	69.8	**74.5**	80.3
12.00%	55.7	58.3	61.4	65.0	69.4

For the power generation segment the CoD was chosen for the sensitivity of the discount rate, as the discount rate of this business segment is mainly driven by the CoD. In contrast to the project sale segment, the valuation of the power generation segment recognizes extremer deviations from the derived share price. Assuming the growth rate for the terminal value of 2%, a reduction in the CoD from the assumed 4.4%[13] to 4% can lead to an increase in share price of more than EUR 20, which shows the high sensitivity of the equity valuation of the power generation segment regarding the financing costs. On the other hand, ceteris paribus, a higher CoD would also lead to a significantly lower valuation.

TABLE 7: POWER GENERATION SENSITIVITY

Power Generation - Sensitivity (CoD vs. TV growth rate)					
66.7	0.50%	1.00%	1.50%	2.00%	2.50%
3.80%	37.3	49.0	69.1	112.3	270.6
4.00%	34.0	44.1	60.9	94.3	193.5
4.40%	28.3	36.0	48.1	**69.7**[14]	119.0
5.00%	21.6	27.0	34.9	47.4	70.7
5.50%	17.2	21.3	27.1	35.7	50.1

[13] For the sensitivity the average CoD was applied and not the respective annual CoD.
[14] Share price is not matching the derived value of EUR 66.7 as the sensitivity considered the average CoD and not respective annual CoD

4 Relative Valuation

4.1 Peer Selection

For the relative valuation, two companies were identified as suitable peers that are also active as IPPs in Europe. The first peer is Encavis AG, the company is listed in the MDAX with a market capitalization of EUR 1,800m. In 2022, the company generated total revenues of EUR 487m and an EBITDA of EUR 350m, which corresponds to an EBITDA margin of 72%. Similar to Energiekontor, the company operates its own wind farms and solar parks. In addition, the company offers third parties to take over the management of their parks (Encavis AG, 2022).

The second company is Neoen SA, the largest French based IPP with an operational capacity of 4,983 MW in 2023, which represents an increase of 932 MW compared to 2022. The power generating assets are spread across Europe, Africa, Australia and America. Neoen has been able to increase its operational capacity in this magnitude, as the company is also acquiring operational assets from developers, such as two operational solar plants in Australia with a total capacity of 460 MWp in 2023. The company achieved in 2023 revenues of EUR 524.4m, with an EBITDA of 360m[15] resulting in an EBITDA margin of 68.7% (Neoen, 2024). In terms of revenues Neoen achieves a similar level as Encavis, however Encavis is more profitable. A comparison of the net income margin shows that Neoen achieved in 2022 based on its adjusted net income a margin of 9.5%, compared to the by Encavis achieved margin of 17.1%. This difference in profitability is also displayed in the PER of the stocks. As of the 29th of December 2023, Encavis traded at a PER of 30.2, compared to Neoen with a 84 PER. However, the PER is not appropriate for a comparison, due to the size of Neoen's balance sheet and the related interest expenses which reduce the net income of the company. In 2022 Neoen's balance sheet position for net PP&E amounted to EUR 4.5b, whereby Encavis had a position of EUR 2.3b. Energiekontor is significantly smaller in comparison to its peers with a PP&E position of EUR 307.5m in 2022.

4.2 Multiple Valuation

For the relative valuation are mainly 2 multiples considered, the EV / EBITDA and EV / EBIT multiple. The PER has not been considered due to the low net income of Neoen, but at the same time high valuation which would lead to an overestimation of Energiekontor's share price.

[15] According to Refinitiv, as the company is presenting on its website an adjusted EBITDA of EUR 475m which is not considering SG&A expenses

The project sale segment is less profitable than the power generation segment, which makes the EBITDA margin of the company, with 38%, appear worse in comparison to Encavis's and Neoen's margin of 72% (2022). Nevertheless, looking solely at the power generation segment of Energiekontor, the EBITDA margin is with 77% close to those of their peers. In 2022, Encavis and Neoen achieved an EBIT margin of 41% and 46% respectively. In comparison, Energiekontor margin in the same year 31%. After adjusting for D&A, the delta in margin is still significant, however, the magnitude decreases. Therefore, the relative valuation is focusing on the EV / EBIT multiple.

TABLE 8: VALUATION MULTIPLES

Multiple	Encavis	Neoen	Energiekontor
EV / EBITDA	7.2	10.5	11.5
EV / EBIT	12.7	16.4	14.4
PER	30.2	84.0	25.9

Table 8 shows that the multiples of Energiekontor and Neoen are close to each other, except for the PER, due to the low net income of Neoen. Energiekontor achieved in 2022 with total revenues of EUR 261m a net income of EUR 45.5m, compared to the by Neoen achieved net income of EUR 45.2m, with revenues of EUR 503m.

TABLE 9: MULTIPLE VALUATION

	Multiple	Encavis	Neoen
Share Price	EV / EBITDA	41	65
	EV / EBIT	62	84

Considering the EV / EBIT multiple, Energiekontor's valuation is in a range of EUR 62 – 84, with an average of EUR 72.7. With a relative valuation at EUR 72.7, the valuation is close to the valuation of the 29th December 2023 at EUR 82.70. Nevertheless, the relative valuation shows a downside of 12%. However, it should be borne in mind that the applied multiples are backward-looking multiples, which only refer to past financial performances and consequently don't incorporate the growth potential of the company. As the company is still growing and will reach its mature stadium over the next years, the DCF valuation is more suitable than the presented relative valuation.

5 Monte Carlo Valuation

In addition to the DCF and multiple valuation, a Monte Carlo simulation of the share price was performed. The Monte Carlo simulation is based on the Geometric Brownian Motion (GBM) which is a stochastic process (Reddy & Clinton, 2016). The GBM uses the historical average of the annual growth rate of the stock price as well as the volatility. The observed descriptive statistics and results can be seen in table 10 below. The assumed mean and standard deviation are based on stock returns from 2017 until 2023.

Table 10: Monte Carlo Simulation

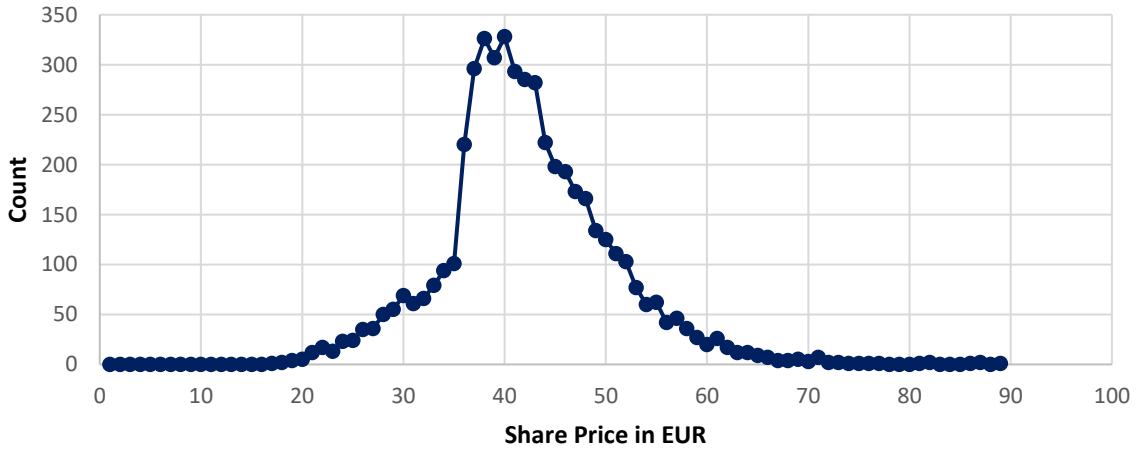
Descriptive Statistics	
Mean (Monthly)	2.02%
STD (Monthly)	9.71%
Mean (Annual)	24.26%
STD (Annual)	33.62%

Forecast 2024	
Median Price	99.2
Mean Price	105.5
Upside (Median)	20.6%
Upside (Mean)	27.7%

Based on the presented descriptive statistics, the stock price for the period t = 1, which corresponds to the year 2024, is forecasted with the formula of the GBM below. This stochastic process is repeated 5000 times and results in an average share price of EUR 105.5 and median share price of EUR 99.2.

$$(17) \quad Ln(Stock\ Price_{t=1}) = Ln(Stock\ Price_{t=0}) + (\mu_{annual} - \sigma_{annual}{}^2 + \sigma_{annual} * N{\sim}INV^{16}(Random^{17}))$$

Figure 27: Distribution of Share Price



[16] Inverse of the standard normal distribution
[17] Random Number larger than 0 and smaller than 1 (0 < x < 1)

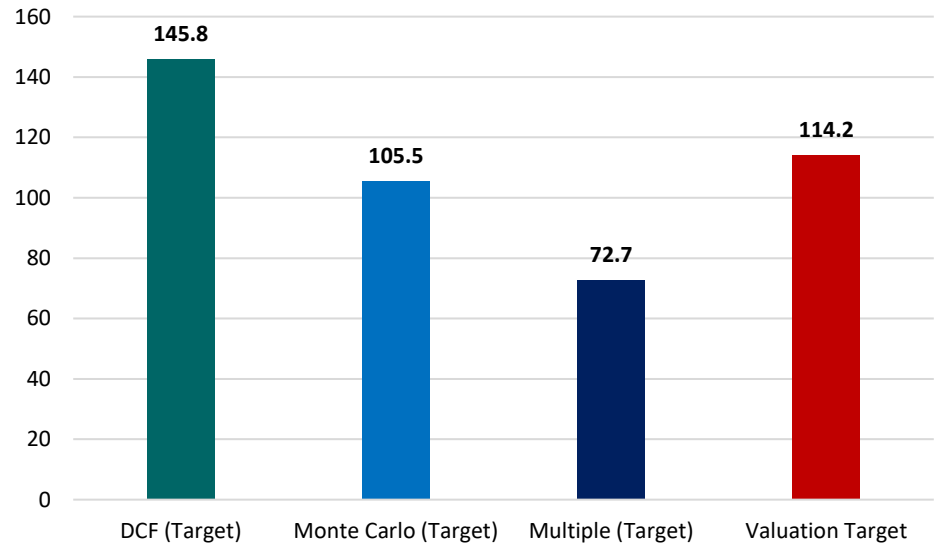
6 Conclusion

This thesis performed three valuation methods to assess the fair value of the Energiekontor AG share price. After stressing the assumptions of the DCF valuation regarding several inputs, e.g. cost of equity, cost of debt and general growth assumptions, the DCF valuation values the share price at EUR 145.8.

The Monte Carlo simulation which is forecasting based on historical growth rates the share price, values Energiekontor on average after 5000 iterations at EUR 105.5. This result needs to be considered with caution, as it is purely relying on past performance, and it is uncertain whether the company will be able to sustain this growth trend.

The multiple valuation based on the backward-looking EV / EBIT multiple of Energiekontor's main peers Neoen and Encavis shows no undervaluation, based on current financials. However, in contrast to the DCF and Monte Carlo valuation, the backward looking multiple is not considering the anticipated future growth of the company, which explains the significant difference in valuation.

FIGURE 28: VALUATION SUMMARY



In order to consider the characteristics of the different valuation methods with their respective advantages and drawbacks, a weighted average of all three valuation methods is applied. The highest weight of 50% is attributed to the DCF valuation, in order to capture the future growth projections of the company. The second highest weight with 35% is attributed to the multiple valuation, to factor in that the company might not be able to significantly exceed its current earnings level in the future. The lowest weight is attributed to the Monte Carlo valuation with

the remaining 15%, as this valuation method is forecasting the share price solely relying on historical growth rates. The weighted average of the three valuations results in a share price of EUR 114.2, with a potential upside of up to 38.1% compared to the closing price of the 29th December at EUR 82.7.

7 Appendix

7.1 Comparison Investment Bank

The performed equity valuation is also compared with an equity research report of a German investment bank, considering the report from First Berlin Equity Research (FB), published on the 18th December 2023 (First Berlin Equity Research, 2023). Similar to the DCF valuation which was performed for this thesis, FB applied a sum-of-the-parts valuation for all segments. Based on the DCF valuation, the resulting share price of Energiekontor amounts to EUR 134.0. Considering the closing price as of the 15th December 2023 (EUR 74), FB issues a buy recommendation with a potential upside of up to 81%. For the comparison with FB's report, the DCF valuation of each segment will be compared with FB's segment valuation.

FB's values the project sale segment at EUR 74.99 which almost matches the valuation of the performed DCF valuation, with a valuation at EUR 74.52. Although both valuations derive a valuation of c. EUR 75, there are significant differences in the underlying assumptions. The main differences compared to FB's report are (1) lower WACC (2) lower net sales growth (3) lower terminal value growth rate (4) lower EBIT margin.

FB is assuming a CoE of 12% for the project sale segment and a pre-tax CoD of 7.5%, resulting in a WACC of 9.3%. In comparison, the average WACC of the project sale segment is 7.0%. The difference is mainly due to a lower CoD, which is on average at 4.4%.

The net sales growth differs significantly, as FB's report assumes a higher growth rate over a longer period of time. For example, in 2030 FB assumes a net sales growth rate of 10.4% whereby in the performed DCF valuation a growth rate of 5.6% is assumed. Furthermore, FB assumes a terminal value growth rate of 4%, compared to the assumed 2% of the performed valuation. Lastly, the by FB assumed EBIT margin of 16.9% for the terminal value is above the assumed 13.1%. To conclude, FB assumes a higher cost of capital, but also higher revenue growth as well as a higher profitability of the segment. In contrast, the performed valuation assumes a lower cost of capital with a lower profitability and revenue growth. Nevertheless, both valuations derive the same share price.

In contrast to the project sale segment, there is a clear difference in the valuation of the power generation segment. FB values the segment at EUR 45.3, compared to the significantly higher DCF valuation of EUR 66.7. The difference is mainly due to a different discount rate, as the WACC of FB is 4.5% and the average WACC of the performed valuation 3.3%. FB's WACC is significantly higher due to the constant pre-tax CoD of 5%. In contrast, the CoD of the

performed valuation is decreasing over time in line with the decline of the risk-free rate. Furthermore, FB assumes a debt to assets ratio of 70%, compared to the assumed 90%. A further difference in valuation is due to a lower terminal value growth rate of 0.5%, compared to the applied 2%. If also a growth rate of 0.5% is considered, the valuation of the power generation segment would ceteris paribus reduce to EUR 35.

With a valuation of the service segment at EUR 13.9 by FB, the largest difference in valuation can be observed in the service segment. In contrast, a value of only EUR 4.6 was determined in the performed DCF valuation. The difference in valuation is due to the differing growth assumptions of the service segment. Due to the lack of historical growth in the service segment and the fact that the segment is not mentioned in Energiekontor's growth strategy, it was assumed that the FCFFs of the service segment will only grow at a rate of 3%. This leads to a growth rate of the FCFFs of 3.0% (CAGR) between 2024 and 2030. In contrast, FB assumes a CAGR of the FCFFs of 15.7% over the same time span.

Considering all company segments, the total DCF valuation of Energiekontor at EUR 145.8 is only c. 9% higher than FB’s valuation at EUR 134.

7.2 Merit-Oder-Model

The merit order model optimizes electricity supply by prioritizing power plants with the lowest marginal costs in delivering power. According to the model, power plant suppliers will offer their power to the market at a marginal cost. The model assumes that power plants aim to cover each megawatt hour's marginal cost and consequently, those with lower costs are used more frequently. In practice renewable plants are used first due to their comparable low marginal costs. Until the demand is met, further energy plants with higher marginal costs will step in, e.g. nuclear plants and gas plants. However, at the end the power plant with the most expensive marginal cost, which is positioned at the end of the merit order determines the price on the exchange for all power plants involved. The merit order model just serves as one approach to fostering a functional electricity market by aligning supply with cost considerations (Next Kraftwerke, 2024).

7.3 EEG Tariffs

The EEG (Erneuerbare-Energien-Gesetz), or Renewable Energy Sources Act, was introduced in Germany in 2000. It was a landmark piece of legislation aimed to accelerate the deployment of renewable energy technologies, such as wind and solar power, in order to combat climate

change and reduce dependence on fossil fuels. The EEG established the feed-in tariff system as a key mechanism to incentivize investment in renewable energy infrastructure by offering guaranteed payments for electricity generated from renewable sources (Bundesnetzagnetur, 2024).

7.4 Financials

TABLE 11: HISTORICAL INCOME STATEMENT

	Financial Year	2018	2019	2020	2021	2022
Total Revenues	**EURm**	**134**	**100**	**168**	**270**	**261**
Project Sale	EURm	75	41	111	215	175
Power Generation	EURm	54	55	54	50	77
Services	EURm	5	4	4	5	9
Total OpEx	**EURm**	**(94)**	**(64)**	**(105)**	**(188)**	**(161)**
Project Sale	EURm	(76)	(47)	(86)	(167)	(140)
Power Generation	EURm	(14)	(13)	(16)	(18)	(17)
Services	EURm	(3)	(3)	(4)	(3)	(4)
Correction	EURm					
EBITDA	**EURm**	**41**	**37**	**63**	**82**	**100**
Project Sale	EURm	(2)	(6)	25	48	35
Power Generation	EURm	40	42	38	32	60
Services	EURm	3	1	0	2	5
D&A	**EURm**	**(19)**	**(23)**	**(19)**	**(20)**	**(20)**
Project Sale	EURm	(0)	(1)	(1)	(1)	(1)
Power Generation	EURm	(18)	(22)	(18)	(19)	(19)
Services	EURm	-	(0)	(0)	(0)	(0)
EBIT	**EURm**	**22**	**16**	**46**	**62**	**80**
Project Sale	EURm	(2)	(7)	24	47	34
Power Generation	EURm	21	21	20	13	41
Services	EURm	3	1	0	2	5
Correction	EURm		2	2		
EBT		**10**	**1**	**31**	**45**	**63**
Project Sale	EURm	(5)	(10)	18	42	28
Power Generation	EURm	12	8	10	1	30
Services	EURm	3	1	0	2	5
Correction	EURm	-	2	2	-	-

TABLE 12: FORECASTED INCOME STATEMENT

	Financial Year	2023E	2024E	2025E	2026E	2027E	2028E	2029E	2030E
Total Revenues	**EURm**	**387**	**547**	**708**	**860**	**993**	**1,104**	**1,182**	**1,242**
Project Sale	EURm	308	459	612	755	878	979	1,057	1,116
Power Generation	EURm	71	78	86	95	104	115	115	115
Services	EURm	9	9	10	10	10	11	11	11
Total OpEx	**EURm**	**(292)**	**(424)**	**(559)**	**(684)**	**(793)**	**(883)**	**(951)**	**(1,001)**
Project Sale	EURm	(265)	(395)	(527)	(650)	(756)	(843)	(910)	(961)
Power Generation	EURm	(20)	(23)	(25)	(27)	(30)	(33)	(33)	(33)
Services	EURm	(6)	(6)	(6)	(7)	(7)	(7)	(7)	(8)
Correction	EURm								
EBITDA	**EURm**	**96**	**123**	**149**	**176**	**199**	**221**	**232**	**240**
Project Sale	EURm	42.7	63.7	85.0	104.9	122.0	135.9	146.8	155.0
Power Generation	EURm	50.1	55.7	61.2	67.3	74.0	81.4	81.4	81.3
Services	EURm	3.1	3.2	3.2	3.3	3.4	3.5	3.7	3.8
D&A	**EURm**	**(32)**	**(37)**	**(41)**	**(46)**	**(51)**	**(56)**	**(57)**	**(57)**
Project Sale	EURm	(2.5)	(3.7)	(4.9)	(6.0)	(7.0)	(7.8)	(8.4)	(8.9)
Power Generation	EURm	(29.9)	(33.2)	(36.5)	(40.1)	(44.1)	(48.5)	(48.5)	(48.5)
Services	EURm	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)	(0.0)
EBIT	**EURm**	**64**	**86**	**108**	**129**	**148**	**165**	**175**	**183**
Project Sale	EURm	40	60	80	99	115	128	138	146
Power Generation	EURm	20	23	25	27	30	33	33	33
Services	EURm	3	3	3	3	3	4	4	4

TABLE 13: INCOME STATEMENT IN % OF REVENUES OF RESPECTIVE SEGMENT

	Financial Year	2018	2019	2020	2021	2022	2023E	2024E	2025E	2026E
Total OpEx										
Project Sale	%	102%	116%	78%	78%	80%	86%	86%	86%	86%
Power Generation	%	27%	24%	29%	35%	23%	29%	29%	29%	29%
Services	%	53%	78%	89%	66%	48%	67%	67%	67%	67%
EBITDA										
Project Sale	%	-2%	-16%	22%	22%	20%	14%	14%	14%	14%
Power Generation	%	73%	76%	71%	65%	77%	71%	71%	71%	71%
Services	%	47%	22%	11%	34%	52%	33%	33%	33%	33%
D&A										
Project Sale	%	0%	2%	1%	0%	1%	1%	1%	1%	1%
Power Generation	%	34%	39%	34%	39%	24%	42%	42%	42%	42%
Services	%	0%	0%	1%	1%	0%	0%	0%	0%	0%
EBIT										
Project Sale	%	-2%	-18%	21%	22%	19%	13%	13%	13%	13%
Power Generation	%	39%	37%	37%	26%	53%	29%	29%	29%	29%
Services	%	47%	22%	11%	34%	52%	33%	33%	33%	33%

TABLE 14: HISTORICAL BALANCE SHEET

	Financial Year	2018	2019	2020	2021	2022
Total Assets	**EURm**	**342**	**381**	**437**	**549**	**611**
Non-Current Assets	**EURm**	**205**	**227**	**190**	**250**	**308**
Project Sale	EURm	0	3	3	3	3
Power Generation	EURm	205	225	187	248	305
Services	EURm	-	0	0	0	0
Current Assets	**EURm**	**137**	**154**	**247**	**298**	**304**
Project Sale	EURm	112	126	219	267	260
Power Generation	EURm	23	26	25	29	39
Services	EURm	2	2	3	2	5

Total Liabilities & Equity	**EURm**	**342**	**381**	**437**	**549**	**611**
Non-Current Liabilities	**EURm**	**222**	**253**	**226**	**282**	**324**
Project Sale	EURm	29	29	43	45	43
Power Generation	EURm	193	222	182	237	281
Services	EURm	0	1	0	0	0
Current Liabilities	**EURm**	**43**	**62**	**127**	**171**	**149**
Project Sale	EURm	22	40	100	135	113
Power Generation	EURm	21	22	26	36	36
Services	EURm	0	0	1	1	0
Equity	**EURm**	**77**	**66**	**85**	**96**	**138**
Project Sale	EURm	61	59	79	90	107
Power Generation	EURm	14	7	3	5	27
Services	EURm	2	0	2	1	4

TABLE 15: CASHFLOWS OF DCF

	Financial Year	2018	2019	2020	2021	2022	2023E	2024E	2025E
EBITDA	**EURm**	**41**	**37**	**63**	**82**	**100**	**96**	**123**	**149**
Project Sale	EURm	(2)	(6)	25	48	35	43	64	85
Power Generation	EURm	40	42	38	32	60	50	56	61
Services	EURm	3	1	0	2	5	3	3	3
D&A	**EURm**	**(19)**	**(23)**	**(19)**	**(20)**	**(20)**	**(32)**	**(37)**	**(41)**
Project Sale	EURm	(0)	(1)	(1)	(1)	(1)	(2)	(4)	(5)
Power Generation	EURm	(18)	(22)	(18)	(19)	(19)	(30)	(33)	(36)
Services	EURm	-	(0)	(0)	(0)	(0)	(0)	(0)	(0)
EBIT	**EURm**	**22**	**14**	**44**	**62**	**80**	**64**	**86**	**108**
Project Sale	EURm	(2)	(7)	24	47	34	40	60	80
Power Generation	EURm	21	21	20	13	41	20	23	25
Services	EURm	3	1	0	2	5	3	3	3
NOPAT	**EURm**	**15**	**10**	**31**	**43**	**56**	**45**	**60**	**76**
Project Sale	EURm	(1)	(5)	17	33	24	28	42	56
Power Generation	EURm	15	14	14	9	29	14	16	17
Services	EURm	2	1	0	1	3	2	2	2
Delta NWC	**EURm**	**-**	**9**	**19**	**(0)**	**22**	**112**	**108**	**110**
Project Sale	EURm	-	10	69	(6)	(4)	124	112	114
Power Generation	EURm	-	(2)	(50)	6	24	(10)	(4)	(4)
Services	EURm	-	0.2	(0.4)	(0.1)	2.1	(1.0)	0.0	0.0
CAPEX	**EURm**	**-**	**45**	**4**	**84**	**97**	**85**	**80**	**84**
Project Sale	EURm	-	2	1	1	0	7	7	9
Power Generation	EURm	-	44	3	83	96	78	72	75
Services	EURm	-	-	-	-	0	0	0	0
FCFF	**EURm**	**34**	**(21)**	**28**	**(20)**	**(43)**	**(120)**	**(91)**	**(77)**
Project Sale	EURm	(1)	(16)	(52)	39	28	(100)	(74)	(61)
Power Generation	EURm	33	(6)	79	(60)	(72)	(23)	(19)	(17)
Services	EURm	2	0	1	1	1	3	2	2

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