MOODY'S
INVESTORS SERVICE

CREDIT OPINION
25 October 2023

Update

Send Your Feedback

RATINGS

RWE AG

Domicile	Essen, Germany
Long Term Rating	Baa2
Type	LT Issuer Rating - Dom Curr
Outlook	Stable

Please see the ratings section at the end of this report for more information. The ratings and outlook shown reflect information as of the publication date.

Contacts

Knut Slatten +33.1.5330.1077
VP-Sr Credit Officer
knut.slatten@moodys.com

Mark Remshardt +49.69.70730.808
VP-Sr Credit Officer
mark.remshardt@moodys.com

Andrew Blease +33.1.5330.3372
Associate Managing Director
andrew.blease@moodys.com

RWE AG

Update to credit analysis

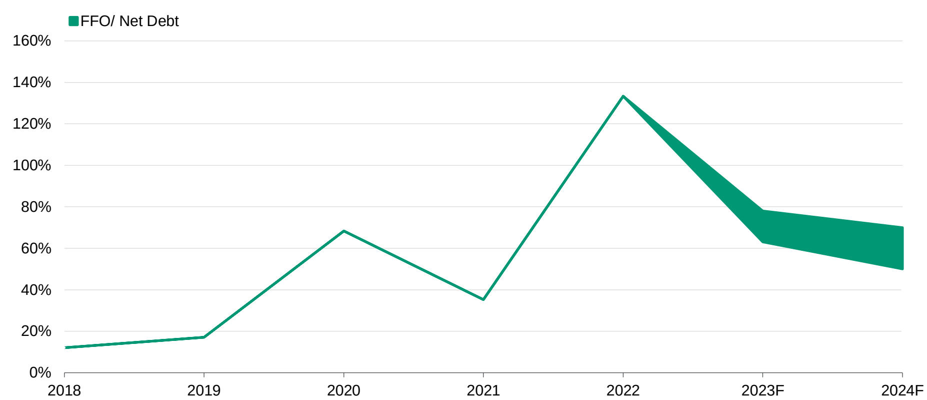
Summary

On 1 March 2023, RWE AG completed the purchase of 100% shares of Con Edison Clean Energy Businesses, Inc (CEB) for an enterprise value of $6.8 billion. The transaction has complemented RWE's renewables portfolio with 3.1 gigawatt (GW) generation capacity (mostly solar) and a development pipeline of more than 7 GW, positioning RWE as one of the biggest renewables energy companies in the US.

RWE's Baa2 issuer rating reflects its large and well-diversified generation portfolio; progress in executing the strategy of growing the renewables generation portfolio while reducing conventional thermal coal-based capacity; and solid financial metrics, underpinned by a balanced financial policy and strong operating performance.

These positives are balanced against RWE's exposure to potentially volatile trading activities and wholesale electricity prices; the relatively short remaining life of its coal and lignite conventional generation earnings in the context of long-term provisions; the still-high, but improving, exposure to thermal electricity generation; and some degree of execution risk associated with RWE's capital spending programme.

Exhibit 1
We expect RWE's funds from operations (FFO)/net debt to stay well above 30% until 2025



Source: Moody's Investors Service

Credit strengths

» The acquisition of CEB, which has further accelerated RWE's focus on renewables

» Large and diversified generation portfolio

» Lower-risk contracted renewables to account for most of the cash flow

» Balanced financial policy and commitment to maintaining a prudent financial profile

Credit challenges

» Evolution of leverage will be vulnerable to capex and margin calls

» Conventional generation output will decline over time because of the closure of thermal coal-based power plants.

» Conventional earnings have a short life in the context of long-term provisions.

» High exposure to commodity derivatives and margin calls could affect liquidity positioning.

Rating outlook

The stable outlook reflects our expectation that RWE will continue to transform its own renewables pipeline into earnings, allowing for its funds from operations (FFO)/net debt to remain at least in the high 20s in percentage terms. Moreover, the stable outlook also incorporates our expectation that RWE will put mitigants in place to protect its credit metrics should this become necessary.

Factors that could lead to an upgrade

Following the acquisition of CEB, and the time it will take to integrate it, and the continuing difficult market conditions in Europe, a rating upgrade is currently unlikely.

Factors that could lead to a downgrade

The Baa2 issuer rating could be downgraded should RWE fail to maintain its FFO/net debt at least in the high 20s in percentage terms. Moreover, given the volatility in the commodity derivatives market, downward pressure could also develop should RWE's liquidity profile deteriorate sharply.

Key indicators

Exhibit 2

RWE AG (consolidated)

	Dec-18	Dec-19	Dec-20	Dec-21	Dec-22	12-18 Months Forward View
FFO / Net Debt	12.1%	17.0%	68.4%	35.2%	133.3%	50% - 63%
RCF / Net Debt	6.9%	10.2%	58.6%	25.1%	114.5%	38% - 53%
(FFO + Interest Expense) / Interest Expense	4.3x	3.2x	6.7x	5.0x	6.6x	5.3x - 6.5x

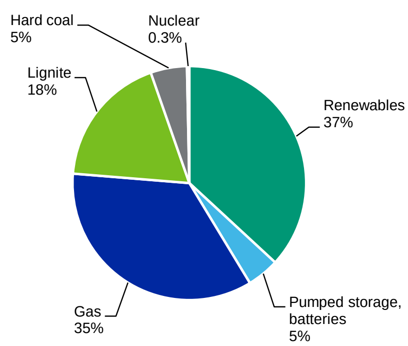
All ratios are based on Adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations. For 2017, ratios include the impact of the nuclear tax refund. For definitions of Moody's most common ratio terms, please see the accompanying User's Guide.
Source: Moody's Financial Metrics™

Profile

RWE AG, headquartered in Essen, is a holding company for a group that is mainly involved in power generation. With around 156 terawatt hours (TWh) of electricity output (2022 data), it is one of the largest generators in Europe.

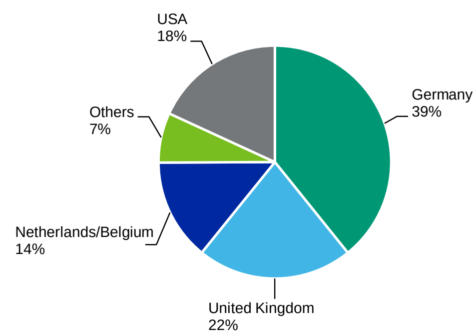
On 1 July 2020, RWE closed a complex asset swap with E.ON SE (Baa2 stable) after RWE received innogy's renewables and gas storage businesses, and stake in Kelag. Following the completion of the asset transfer, RWE's generation fleet became larger and more diversified. Moreover, with the acquisition of CEB, which closed in March 2023, the company's share of renewables in total installed capacity is now more than 35%.

Exhibit 3
RWE has diversified installed capacity ...
Breakdown of installed capacity by fuel type (as of June 2023)



Total installed pro rata capacity of 45.3 gigawatts (GW).
Sources: Company and Moody's Investors Service

Exhibit 4
... with most of its capacity in Germany and the UK
Breakdown of installed capacity by geography (as of June 2023)



Total installed pro rata capacity of 45.3 GW.
Sources: Company and Moody's Investors Service

RWE is listed on the Frankfurt Stock Exchange. As of the beginning of October 2023, the company had a market capitalisation of around €25 billion.

Detailed credit considerations

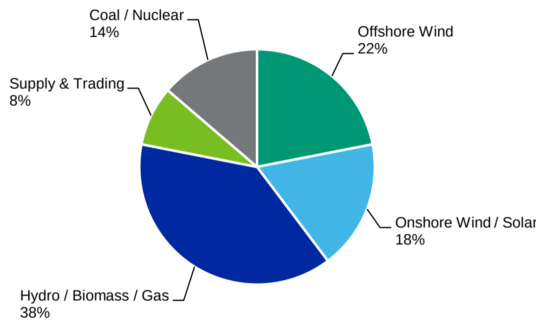
Focus on renewables (RES) continues, and completion of the CEB acquisition significantly increases RWE's solar generation portfolio

Since RWE closed the asset swap with E.ON, it has continued to expand its renewables portfolio. As of the end of June 2023, RWE had 15.3 GW of installed wind and solar capacity, and 7.2 GW (including batteries) was under construction or had seen the final investment decision taken. During 2022, 2.4 GW of green capacity was commissioned.

The asset swap with E.ON improved RWE's business profile, and reduced its exposure to the legacy coal and nuclear operations. The earnings contribution from renewables will grow as the company continues to build out its project pipeline. At the same time, the contribution from lignite and coal will fall as plants close over time. The company has, however, a still-sizeable exposure to carbon-intensive generation, with 9.8 GW of coal and lignite capacity, and 14 GW of gas as of year-end 2022.

Exhibit 5

Renewable energy will contribute around 40% of RWE's EBITDA in 2023
EBITDA outlook (2023)

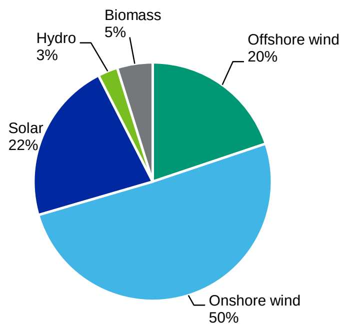


Renewables excludes hydro/biomass/gas. Forward-looking EBITDA split represents our view and not that of the issuer.
Sources: Company and Moody's Investors Service

RWE has a well balanced operating portfolio with a significant share of onshore, offshore and photovoltaics . More than half of the onshore wind capacity (total of 8.4 GW as of the end of June 2023) is in the United States of America (Aaa stable), with the remainder spread across a number of European countries. Underpinned by the acquisition of CEB, most of RWE's solar generation capacity is also concentrated in the US (3.0 GW out of 3.6 GW of total capacity), with the rest spread across the world. The offshore wind portfolio includes 3.3 GW of installed capacity, mainly in the United Kingdom (Aa3 stable) and Germany (Aaa stable).

Exhibit 6

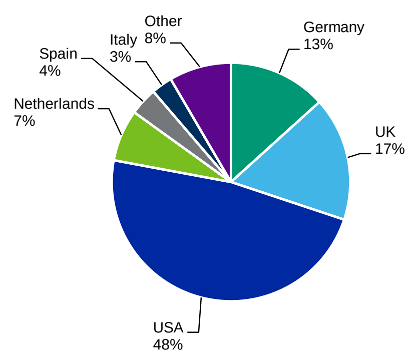
Acquisition of CEB has contributed to a more balanced renewables portfolio, although some concentration in onshore wind persists
Installed renewables capacity (as of 30 June 2023)



Total pro rata capacity of 16.6 GW.
Sources: Company and Moody's Investors Service

Exhibit 7

The renewables portfolio is well diversified geographically, but its exposure to the US has increased
Installed capacity (as of 30 June 2023)

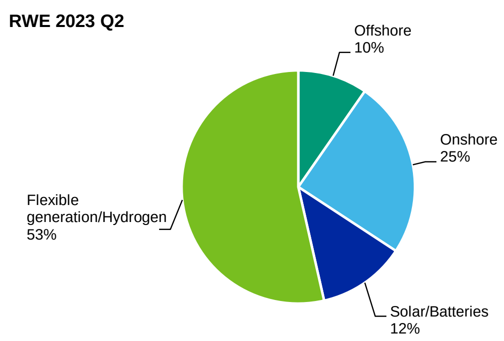


Total pro rata capacity of 16.6 GW.
Sources: Company and Moody's Investors Service

RWE will provide an update of its strategy on the capital markets day scheduled for the end of November 2023. Under its current capital spending plan, RWE foresees up to €50 billion of (gross) capital spending until the end of this decade. This will allow for an additional 2.5 GW of net new capacity every year on average. In offshore wind, there is fairly high visibility, with growth until 2027 underpinned by ongoing projects, which will take net capacity to 5 GW by 2027. Beyond 2027, RWE claims to have secured 7 GW of incremental rights until 2030 as it aims to more than triple the 2020 capacity from 2.4 GW to 8 GW by 2030. Goals for onshore and solar are also ambitious, with the company aiming to more than triple the installed capacity by 2030.

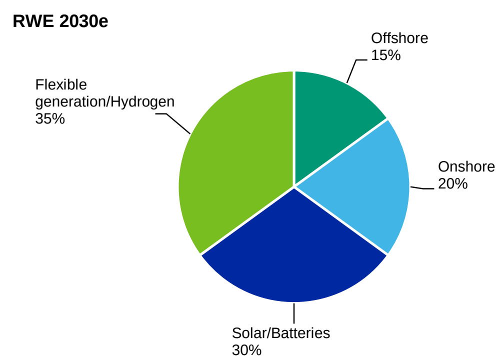
On 1 October 2022, RWE announced the $6.8 billion acquisition of CEB. CEB, which already had more than 3 GW of capacity in operation, is largely focused on photovoltaics and generated some $600 million of EBITDA at the time the acquisition was announced. Through the acquisition of CEB, RWE has now become the second-largest solar operator in the US. The integration of CEB has allowed for a better balancing of the RES portfolio. In addition, the near-term capital spending needs of CEB are largely covered by its own operational cash flow. The CEB acquisition also came with a 7 GW pipeline where RWE expects around 500 megawatt (MW) to be converted into new capacity every year. The acquisition of CEB will position RWE well to reach its 2030 solar and battery targets thanks to CEB's operational solar assets and strong pipeline.

Exhibit 8
Installed renewables capacity as of 30 June 2023



Source: Company

Exhibit 9
RWE expects more than 55 GW of renewables capacity by 2030



Source: Company

Potential pipeline of new projects is robust, but cost inflation in the supply chain is a concern in the near term

In tandem with the ongoing decarbonisation efforts spearheaded by numerous sovereigns across the world, RWE will have plenty of opportunities for future growth. Its home market, Germany, has increasingly augmented its focus on renewables generation as the country phased out the last three nuclear power plants on 15 April 2023 and is gradually exiting coal. Following Russia's invasion of Ukraine, the country further increased its renewables ambitions for the coming years. For example, Germany now aims to increase the share of renewables generation in gross electricity demand to 65% by 2030. As part of this strategy, wind (onshore and offshore) and solar will play an important role. As such, RWE will find growth opportunities in its domestic market over the next few years. There will also be numerous growth opportunities outside of Germany as an increasing number of countries seek to decarbonise and RWE is steadily increasing its geographical footprint.

RWE has previously emphasised its robust hurdle rates when taking investment decisions, and the company does expect to record a return of its weighted average cost of capital (WACC) + 100-300 basis points on new projects as it enters the new investment cycle. RWE seeks to lock in the vast majority of costs on projects where the final investment decision has already been taken. However, cost inflation in the wind supply chain, in combination with increasing interest rates, has been prevalent over the past 12-18 months and has strained the rates of return in the industry as a whole. Whereas RWE to date has not incurred any impairments, as has been the case for certain competitors such as Orsted A/S (Baa1 negative) and Vattenfall AB (A3 stable), increasing cost pressure and capital costs will also pose risks to RWE. Nonetheless, we note that RWE's offshore wind projects in the US are much less mature than those of Orsted, for example, which suggests that only limited costs have been incurred thus far. We also note that RWE does not have any projects that were awarded contract for difference (Cfd) in the UK allocation round four where the strike price was a record-low £37.35 per megawatt hour (MWh) (and from which Vattenfall's impairment stems).

RWE has been successful in a number of new auctions and tenders over the past two years. In 2021, RWE gained access to 3 GW of potential project opportunities in the round four auction of the UK seabed leases. While the company had the lowest price among bidders in the auction, the £82,552 per MW per year (or close to £250 million per year) that the company has to pay reflects the intensity of competition in the market at the time. RWE also won a 1 GW concession in Denmark — the Thor project — which is likely to commission in 2027 and will be run on a merchant basis without subsidies. In 2022, it also won auctions for some 4.6 GW of capacity in the US spread across New York (3 GW) and California (1.6 GW), both projects are not likely to be commissioned until after 2030. More recently, in August this year, RWE won a seabed lease to develop up to 2 GW of offshore wind capacity in the Gulf of Mexico. In this case, RWE's winning bid of $5.6 million reflects a very modest price compared with the price paid for other seabed leases in the US. This partly reflects the increased uncertainty around supply chain costs and increasing interest rates.

On 8 September 2023, the UK government announced the results of the most recent renewable energy auction. While 3.7 GW of low-carbon technologies were awarded a CfD, this was the first allocation round where no offshore wind projects were awarded any capacity. In fact, no qualifying offshore wind projects even participated in the auction as conditions were deemed not satisfactory.

Contracted renewables provide lower-risk earnings, although they are exposed to output variability

Renewable assets benefit, to varying degrees, from support programmes (that is, subsidies, fixed feed-in tariffs, production tax credits, certificates or long-term contracts) that provide a degree of earnings stability and insulation from wholesale power price volatility.

In 2021, we estimate that around 70% of EBITDA of the renewables portfolio was generated from contracted earnings, which were not exposed to merchant power risk. However, we do expect the portion of merchant generation to have increased in 2022 and 2023. This is because certain support programmes act like a floor. When prices are high, as has been the case throughout 2022 and 2023, some of these RES assets will run on a merchant basis at substantially higher prices than the tariff levels. This is mitigated by the addition of CEB to the portfolio given that CEB's solar capacity is almost fully contracted through PPA's.

RWE had previously estimated the remaining life of contracted earnings to be around 12 years. Following the acquisition of CEB, this has now increased as the average weighted remaining tenor at CEB is around 17 years and mainly consists of PPA contracts. We also understand there is limited customer concentration at CEB. The long-term contracted cash flow under supportive and well-established regulatory regimes supports RWE's credit quality.

In view of the ramp-up of renewables, this segment will over time account for an increasing share of the company's EBITDA. While RWE had previously said that its non-core operations (that is, nuclear and coal) will account for less than 5% of adjusted EBITDA by 2023, with RWE's one nuclear reactor operating until April this year, these operations have contributed about 10% of the company's EBITDA over the first half of 2023. On the other hand, in 2022 and in H1 2023, the flexible generation segment's (hydro/biomass/gas) contribution was significantly higher than previous years' earnings because of higher generation margins and strong short-term asset optimisation. This trend is likely to hold at least till 2026 according to the company.

Overall, renewables subsidies provide lower-risk cash flow than market-exposed conventional generation. Wind farms are also subject to output variability depending on wind conditions and asset availability.

Leverage reduction will hinge on maintenance of higher power prices as the heavy investment programme continues

As part of its CMD presentation in 2021, RWE said that it would increase its net leverage tolerance to 3.5x some time after 2025. This compares with the current target of maintaining net leverage below 3x. In its calculation of net leverage, the company excludes liabilities related to its coal operations[1], having set aside assets intended to cover these liabilities. It also no longer includes EBITDA derived from its coal and nuclear operations. As of 30 June 2023, RWE's reported net leverage was 0.7x, up from -0.3x as of year-end 2022. The increase in leverage is mainly a result of €6.3 billion of additional debt resulting from the acquisition of CEB, partly offset by strong operating cash flow of €5.5 billion during the first half.

The company's leverage and cash flow metrics are subject to a degree of volatility reflecting the pace at which margin calls and collaterals unwind. RWE's variation margins (resulting from trades done through exchanges) for its trading business are included in FFO, while its variation margins for hedging are included in working capital. In contrast, initial margins and collateral payments that arise following over-the-counter (OTC) trades are reflected in the company's cash flow from financing. Companies have latitude as to where they present balances in the cash flow statements as there is no prescriptive accounting guidance. The sometimes asymmetric treatment of OTC collateral and variation margin payments can lead to incomparable accounting between companies. However, there is not always specific disclosure or supplementary information in the financial reporting that would allow us to make consistent adjustments. As of 2022, RWE started disclosing separately the amount of collateral payments received/paid related to trading activities (€2.4 billion paid in 2022), which we have adjusted out of FFO.

In tandem with our expectations of still-high capital spending related to its renewable energy ambitions, we expect the underlying free cash flow to be negative over the next two to three years. In addition to maintenance of high power prices and volatility around the unwinding of margin payments, the future evolution of RWE's credit metrics will therefore also reflect the company's investments and proceeds from its asset-rotation strategy. Although the company seeks to make €50 billion of gross investments until 2030, the impact will be mitigated by around €20 billion of disposal proceeds, which will take the net investment to €30 billion. For example, we expect RWE to continue to sell down certain ownership stakes in large development projects.

We continue to view positively the company's commitment to maintaining a solid investment-grade credit rating. RWE has a track record of balanced financial policies as exemplified by the company's €2 billion equity issuance in August 2020, which allowed the funding of the €400 million acquisition of Nordex and capital spending in the short term. The negative impact of the CEB acquisition on credit metrics has been partly buffered by the issuance of around €2.4 billion of mandatory convertible bonds.

As is the case for other German utilities, RWE's Moody's-adjusted debt was in a number of years inflated by growing provisions because of the low interest rate environment. In view of rising interest rates, higher discounting rates may therefore well improve the company's Moody's-adjusted debt figures.

Exhibit 10

RWE's net debt calculations included mining provisions up until the beginning of 2020 ...

RWE's net debt (company definition, in € billion)

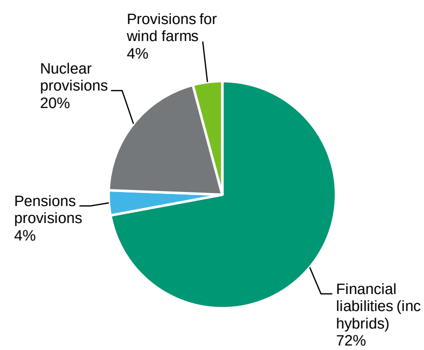
	As of June 2023
Financial debt (including hybrids)	14.76
Others (margin payments, leases, etc)	5.15
Hybrids adjustment	(0.29)
Total financial liabilities	**19.63**
Total financial assets	**20.66**
Pension provisions	0.96
Nuclear provisions	5.50
Provisions for dismantling wind farms & other	0.49
Total non-financial liabilities	**6.95**
Net debt of continuing operations	**5.92**

Sources: Company and Moody's Investors Service

Exhibit 11

... but these have been excluded following ring-fencing

Net debt as of 30 June 2023 per RWE's definition, excluding mining provisions



Sources: Company and Moody's Investors Service

While we use the audited numbers in our debt calculations, changing discount rates will continue to create volatility in both nuclear and pension obligations. Following the payment of €6.8 billion, of which €1.8 billion was related to the risk premium required for the externalisation of the liabilities, in July 2017, RWE's nuclear obligations in Germany declined significantly. The company has been exempted from paying the costs of the interim and final storage of waste from reactors, and its obligations are now limited to dismantling the plants and packaging the low- and medium-level waste once the plants have been shut down. Annual nuclear cash outflow amounts to €450 million-€650 million, as the plants are fully decommissioned.

RWE has long-term provisions against a limited life of current conventional earnings. This risk is mitigated by the presence of substantial financial assets, including RWE's stake in E.ON and certain other assets such as Kelag and Amprion GmbH (Baa1 stable).

Track record of strong operating performance likely to continue over the next two to three years

RWE recorded strong operating performance in 2022, with adjusted EBITDA (as defined by the company) of €6.3 billion, which was significantly above the company's initial guidance of €3.6 billion-€4 billion for the year. In particular, the results were boosted by a stellar performance of the hydro/biomass/gas segment, which recorded EBITDA of €2.4 billion, up from €731 million a year earlier. The extreme volatility in commodity markets also underpinned strong results from supply and trading, which recorded EBITDA of €1.2 billion.

RWE's offshore wind EBITDA amounted to €1,412 million, up from €1,110 million in 2021. The increase essentially reflected capacity addition from Triton Knoll and Kaskasi, and a full-year impact from the consolidation of the Rampion offshore wind farm (integrated as of 1 April 2021). Higher wind speeds than those observed in 2021 also contributed favourably, although the wind speeds were still below the long-term average.

RWE's onshore wind/solar segment EBITDA was up to €827 million in 2022, from €258 million a year earlier. The strong increase mainly reflected the absence of a one-off effect from 2021, as in February 2021, Texas experienced its toughest weather conditions in decades with freezing temperatures. As a result, RWE's wind turbines could not produce electricity and it suffered losses of around €400 million because the electricity it had sold forward had to be bought back from the market at a price of $9,000 per MWh. During 2022, RWE's onshore wind operations also benefited from the higher power price environment.

The hydro/biomass/gas segment EBITDA increased to €2.4 billion in 2022. The segment notably benefited from the high volatility in commodity prices and the exceptional short-term asset optimisation. The substantial earnings from this segment continued in H1 2023, with €1.9 billion of EBITDA reported over the period. RWE is expecting this trend to continue for the next three years, with at least €1.5 billion per year of EBITDA contribution.

For the third year in a row, RWE's supply and trading EBITDA was very strong as well and contributed €1.2 billion to adjusted EBITDA, up from €769 million from that a year earlier. As such, the division has continued its exceptionally strong performance since 2019.

For 2023, RWE initially guided towards adjusted EBITDA in the range of €5,800 million-€6,400 million. The initial guidance reflected a combination of continued growth in offshore wind driven by a normalisation of wind speeds and the commissioning of additional capacity; and earnings contribution from the CEB acquisition. Following a very strong start to the year, this guidance has been upsized to €7,100 million-€7,700 million. The upgraded EBITDA guidance for full-year 2023 is mainly a reflection of the strong outperformance of Supply and Trading, and the hydro/biomass/gas segments. During H1 2023, the company's EBITDA grew by €2.4 billion to €4.5 billion. The hydro/biomass/gas segment EBITDA increased to €1.9 billion (€755 million in H1 2022), while the supply and trading segment performed strongly with adjusted EBITDA of €799 million (-€203 million a year earlier, where RWE had included an impairment of €748 million because of sanctions on coal deliveries from Russia). We expect both these segments' contribution to EBITDA to decline beyond 2023 as electricity and commodity prices return to more normalised levels.

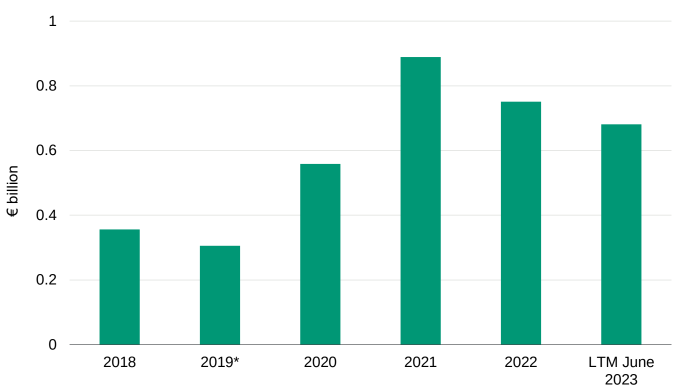
Lignite and nuclear earnings to decline with lower output in the medium term

In 2022, RWE's EBITDA from the lignite and nuclear segments amounted to €751 million, down from the €889 million recorded in 2021. The decline in earnings was largely driven by capacity closures of coal and nuclear power plants despite higher utilisation and higher earnings from the short-term optimisation in 2022.

Exhibit 12

Earnings from lignite and nuclear declined in 2022, driven by closure of nuclear generators

Adjusted EBITDA (in € billion)



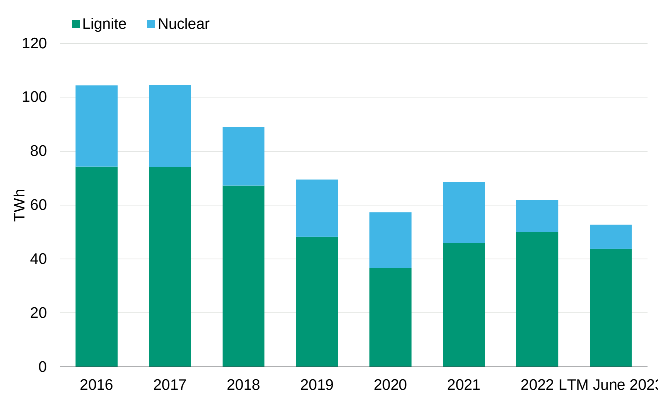
From 2019 onwards, the name of the operating segment changed to "Coal/Nuclear".

Sources: Company and Moody's Investors Service

Exhibit 13

Lignite run more frequently in 2021 and 2022 because of coal for gas switching

Output (in TWh)



Sources: Company and Moody's Investors Service

Given the significant forward hedging of its production through 2022, RWE's thermal generation activities only moderately benefited from the higher power price environment last year.

RWE's hedging strategy is generally designed to minimise the risks in its outright generation portfolio and maximise earnings on the European (spread) portfolio. For the outright positions, RWE focuses on risk mitigation from any potential negative changes in prices, and the position is generally covered first by implicit fuel hedging. By short-selling fuel, the company converts a long outright power position into a long spread position. By doing so, RWE aims to de-risk the outright positions from exposure to more volatile fuel prices and retain the upside from the spread positions. As a result, RWE has a much higher degree of hedges in place on the outright rather than on the spread positions. RWE has, however, hedged its exposure to carbon prices until 2030 and, therefore, is likely to operate with a higher degree of profitability than what the clean dark spread suggests.

Most of the commercial asset optimisation unit's earnings come from the spread position in hard coal and gas, where there has historically been less volatility and greater flexibility to take advantage of prevailing market conditions (for example, outages and high-demand periods) on top of the realised forward hedges.

In April 2023, RWE shut down its last remaining nuclear capacity. As such, its non-core segment will in the future consist only of its coal operations. RWE has guided for the segment (including nuclear up till April 2023) to be slightly up against 2022, with EBITDA of €800 million-€1,200 million. RWE's coal-fired plants could still run frequently over the next six months in view of the energy scarcity following the decline in Russian gas supply. In that regard, we note that 1.2 GW of lignite plants, which were initially scheduled to be closed last year, will now run to March 2024. In October 2023, the German government formally approved to again put back onto the grid a total of 1.9 GW of lignite plants, held in reserve capacity, for the upcoming winter season until March 2024.

RWE's generation fleet, with its significant coal and lignite capacity, exhibits high carbon intensity. The group's strategic shift towards renewables is positive, but RWE continues to have a higher exposure to carbon transition risks than its peers. Its carbon intensity amounted to 0.53 million tons/MWh in 2022, up from 0.50 million tons/MWh in 2021. During 2022, despite the increase in electricity production from renewables by 11%, carbon emissions from the company's power plants increased 2.6%. This essentially reflects a combination of higher load factors at its coal-fired plants and less output produced at its nuclear plants. Carbon intensity will remain high also in 2023 and the first few months of 2024 for the same reasons. Over time, closure of certain coal-fired power plants and conversion of others to fire biomass will reduce RWE's average carbon intensity. The company aims to be net carbon neutral by 2040.

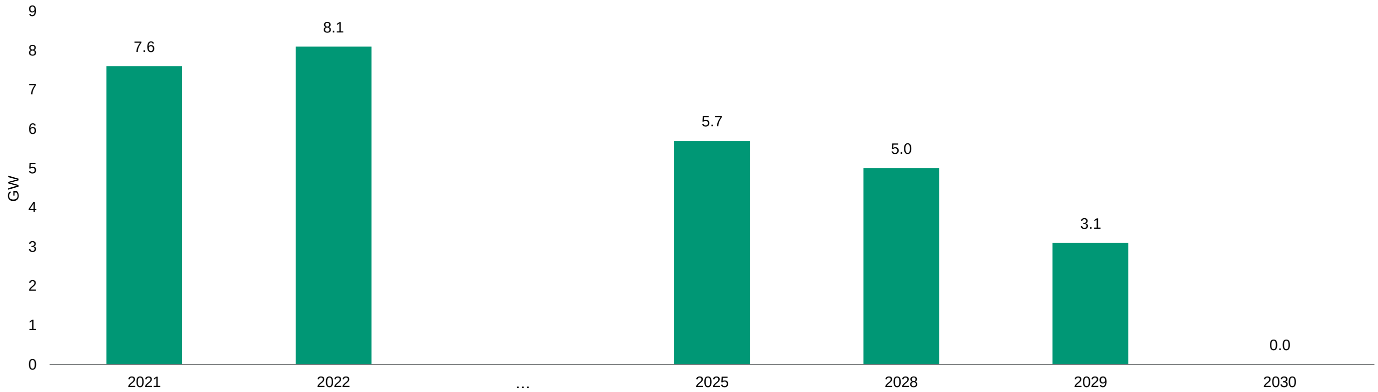
Compensation from the German government will partly fund RWE's exit from lignite as coal exit may accelerate

On 3 July 2020, Germany enshrined in law the country's exit from coal-fired generation and plans to gradually exit all coal generation by 2038. The law provided more visibility into the phaseout of lignite power generation in Germany and the compensation to the industry for shutting down lignite capacity (hard coal operators are compensated for early closures through a tender process with the government). As part of the law, RWE is set to receive around €2.6 billion in compensation payments from the German government. At the time, RWE expected that it would incur costs of around €3.5 billion — most of which related to higher mining provisions.

On 4 October 2022, RWE also announced that it would close its lignite business in 2030 following an agreement with the German government. The earlier closure will not entail any changes to the previously agreed €2.6 billion compensation package that RWE will receive from the government. Whereas RWE will see its mining liabilities increase by €1.3 billion, this will largely be an accounting effect, with a minimal impact on actual cash flow, as the company would no longer be able to expense certain of its costs beyond 2030.

Over the next few years, we expect the net effect of compensation payment and payment out of mining provisions to be broadly neutral.

Exhibit 14
Capacity closures have been moved forward by eight years to 2030



Source: Company

We also view positively RWE's commitment to ring-fencing liabilities associated with the phaseout of coal. In its CMD presentation on 12 March 2020, RWE said that it commits to backing its mining provisions with financial assets. While not a legal ring-fencing, the company's commitment sends a strong signal and suggests that future liability payments arising from its coal liabilities will not be funded using the cash flow of the core business.

Concerns around security of supply will persist, but demand for gas will continue in the interim period

In 2022, the hydro/biomass/gas segment's EBITDA increased to €2.37 billion from €731 million in 2021. The increase was mainly driven by higher generation margins and short-term asset optimisation. Earnings from this segment remained high in H1 2023 as well, with RWE guiding towards the segment generating on average €1.5 billion of EBITDA per year until 2025.

EBITDA from this segment comes from three main sources: system services, intraday and day-ahead optimisation, and from running the asset fleet. Most of the increase in EBITDA came from running the asset fleet. Here, RWE profits from widening of the clean spreads in the forward markets as well as from volatility in commodity prices. RWE has already partially hedged these spreads for 2023 at favourable prices, which will be a driver for high earnings this year. The earnings from intraday and day-ahead optimisation are driven by higher intermittence and volatility in the market as RWE earns margins from short-term dispatch and optimisation from flexible generation fleet. As the general markets transition more towards renewable generation, the scarcity of flexible generation will further fuel the earnings from system services, where RWE receives capacity payments in the UK and Germany resulting from capacity auctions. Moreover, capacity additions from the acquisition of the gas power station Magnum (1.4 GW capacity) in the Netherlands and the commissioning of the gas-fired reserve plant Biblis (300 MW capacity) in Germany from Q1 2023 have further contributed to the increase in earnings.

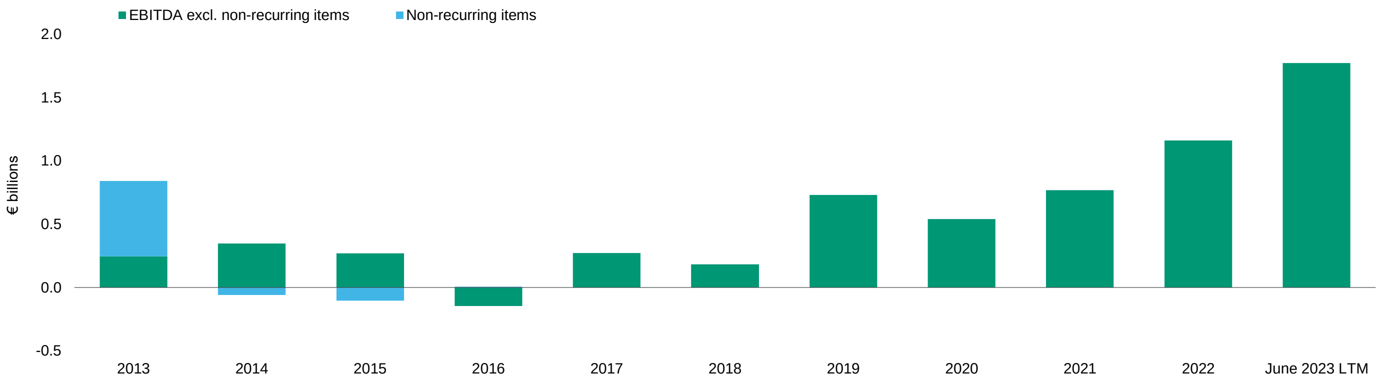
Supply and trading earnings can be variable

RWE has a significant trading business that focuses on proprietary trading and on maximising earnings from its extensive and globally diversified positions and broad knowledge of the commodity and power markets. The company trades both physical and financial products in liquid markets. Principal investments are in private equity-style stakes in energy assets.

Trading activities account for most of this segment's gross margin, with the remainder generated by supply. On average, about 75% of the gross margin is likely to come from physical and financial trading, and the remaining 25% from management of gas supply and infrastructure products, and business-to-business operations for large industrial customers and municipalities. In August 2023, RWE sold its gas storage assets in the Czech Republic to CEPS, as (Aa3 negative) for €360 million.

The division's strong performance over the past three years also indicates its significantly volatile earnings. RWE has suffered losses in this division in the past, including in 2016 when earnings were hurt by, among others, a change in China's strategy on coal output.

Exhibit 15
Supply and trading earnings can be variable
EBITDA (in euro billions)



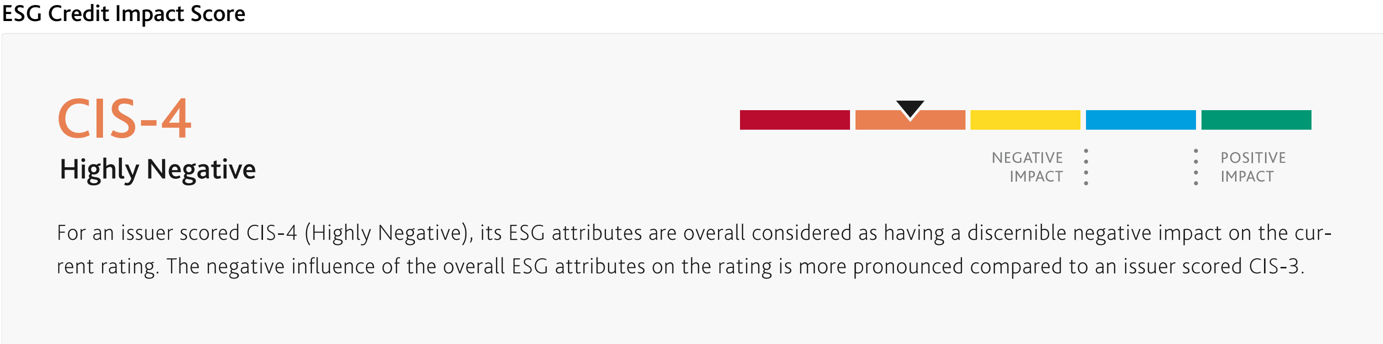
Non-recurring items include mainly legacy gas midstream contracts.
Sources: Company and Moody's Investors Service

We expect the supply and trading division to continue to exhibit some volatility in earnings. Changes in operating cash flow may be subject to greater volatility because of working capital swings associated with trading activities.

ESG considerations

RWE AG's ESG Credit Impact Score is Highly Negative CIS-4

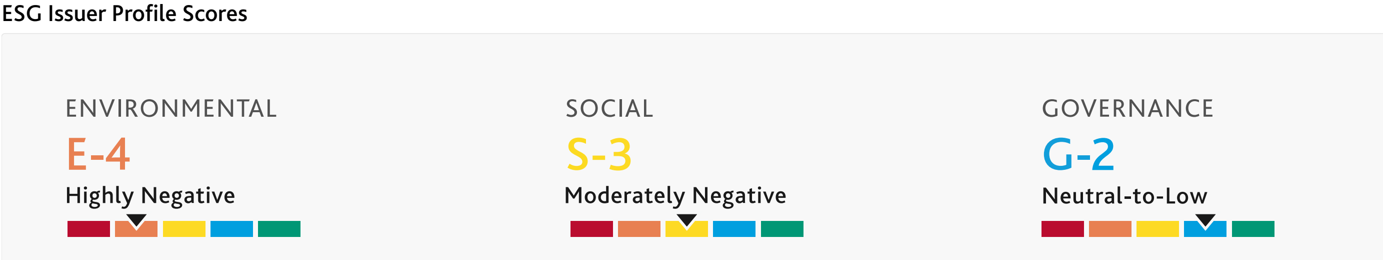
Exhibit 16
ESG Credit Impact Score



Source: Moody's Investors Service

RWE's ESG Credit Impact Score is highly negative (**CIS-4**), indicating that its ESG attributes are overall considered to have a negative impact on the current rating. The scoring reflects a high degree of environmental risks, moderately negative social risks and neutral to low governance risks.

Exhibit 17
ESG Issuer Profile Scores



Source: Moody's Investors Service

Environmental
RWE's high environmental risk (**E-4** issuer profile score) reflects its still high carbon transition risk associated with the company's exposure to coal fired generation in Germany. RWE no longer has any obligations with regards to interim and final storage of its nuclear waste, but is responsible for nuclear decommissioning. The profile also captures the substantial investment programme that RWE is currently undertaking in renewables in order to replace its nuclear and coal fired generation

Social
RWE's exposure to social risks is moderately negative (**S-3** issuer profile score) and reflects the risk that demographics and societal trends could include public concerns over affordability, including public expectation that utilities should act as a public service. These pressures could turn into adverse political intervention. Moreover, the **S-3** IPS also captures that RWE still has mining operations associated to its lignite operations.

Governance
RWE's governance risk is neutral-to-low (**G-2**). The company has a clear financial policy in place and is seeking to maintain its core adjusted net leverage below 3x. It also raised equity during 2020 in order to fund part of its renewable pipeline. Governance risks are also low-to-neutral scores on financial strategy and risk management, management credibility and track record, organizational structure, compliance and reporting.

ESG Issuer Profile Scores and Credit Impact Scores for the rated entity/transaction are available on Moodys.com. In order to view the latest scores, please click here to go to the landing page for the entity/transaction on MDC and view the ESG Scores section.

Liquidity analysis
RWE has a good liquidity profile. In July, the company replaced an expiring syndicated credit line of €3 billion with a €5 billion one, resulting in availability of total about €10 billion of credit lines. On top of it, the company had close to €8.5 billion of cash as of 30 June 2023. While commodity prices and electricity prices have now come down substantially from the peak observed in the summer of 2022, RWE's cash flow and liquidity will be sensitive to future evolution of margin calls or the unwinding of these. In addition to potentially causing temporary pressure on liquidity, the evolution of margin calls and collaterals will ultimately also affect RWE's net debt level and Moody's-adjusted credit metrics.

Structural considerations
RWE's capital structure includes a mix of bank debt and hybrid securities. As of December 2022, RWE had two outstanding hybrids with a total carrying amount of €577 million. The two bonds can be called in April 2025 and March 2026 at the earliest. The Ba1 rating on the hybrid securities is two notches below RWE's senior unsecured rating, reflecting the features of the hybrids that receive basket "C" treatment, that is, we treat them as 50% debt and 50% equity for financial leverage calculations.

We understand that there was around $2.6 billion of project finance debt at CEB, out of which RWE took over some $2 billion as part of the acquisition of CEB. RWE also has project finance debt in place at its Triton Knoll wind farm. Future debt maturities, unless fully reimbursed, will be refinanced at the level of RWE AG. As such, the structural subordination in the company's capital structure is deemed manageable as around half of the project finance debt at CEB will be repaid over the next four years. However, there is currently limited space for incremental amounts of priority debt.

Methodology and scorecard

RWE is assessed in accordance with our Unregulated Utilities and Unregulated Power Companies rating methodology, published in May 2017. The score is based on the unregulated power companies grid, which is part of the same rating methodology.

Exhibit 18

Rating factors

RWE (consolidated)

Unregulated Utilities and Unregulated Power Companies Industry [1][2]	Current FY 12/31/2022		Moody's 12-18 Month Forward View As of 10/8/2023 [3]	
Factor 1 : Scale (10%)	**Measure**	**Score**	**Measure**	**Score**
a) Scale (USD Billion)	Aa	Aa	Aa	Aa
Factor 2 : Business Profile (35%)				
a) Market Diversification	A	A	A	A
b) Hedging and Integration Impact on Cash Flow Predictability	A	A	A	A
c) Market Framework & Positioning	Ba	Ba	Ba	Ba
d) Capital Requirements and Operational Performance	Ba	Ba	Ba	Ba
Factor 3 : Financial Policy (15%)				
a) Financial Policy	Baa	Baa	Baa	Baa
Factor 4 : Leverage and Coverage (40%)				
a) (CFO Pre-W/C + Interest) / Interest (3 Year Avg)	6.2x	Baa	5.6x - 6.5x	Baa
b) (CFO Pre-W/C) / Debt (3 Year Avg)	21.2%	Baa	17% - 23%	Ba
c) RCF / Debt (3 Year Avg)	17.6%	Baa	13% - 19%	Baa
Rating:				
a) Scorecard-Indicated Outcome		Baa2		Baa2
b) Actual Rating Assigned				Baa2

[1] All ratios are based on adjusted financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 31/12/2022.
Source: Moody's Financial Metrics™

Ratings

Exhibit 19

Category	Moody's Rating
RWE AG	
Outlook	Stable
Issuer Rating -Dom Curr	Baa2
Senior Unsecured -Dom Curr	Baa2
Subordinate	Ba1
Commercial Paper	P-2
Other Short Term -Dom Curr	(P)P-2

Source: Moody's Investors Service

Appendix

Exhibit 20
Peer comparison

	RWE AG Baa2 Stable			ENEL S.p.A. Baa1 Negative			Orsted A/S Baa1 Negative			Fortum Oyj Baa2 Stable		
(in EUR million)	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22	FYE Dec-20	FYE Dec-21	FYE Dec-22
Revenue	13,688	24,571	38,366	63,642	81,900	135,653	6,913	11,323	18,305	49,015	6,422	8,804
EBITDA	4,605	3,453	5,501	15,388	15,432	17,218	2,041	1,911	3,283	3,228	2,226	1,668
Total Assets	61,578	142,226	138,502	163,453	206,940	219,618	26,292	36,396	42,032	58,831	150,742	24,839
Total Debt	14,529	21,239	25,392	61,807	76,680	93,887	6,488	9,115	11,307	13,664	19,866	8,995
Net Debt	5,536	7,374	4,936	55,901	67,822	82,846	2,488	5,194	5,863	11,356	12,574	5,324
FFO / Debt	26.1%	12.2%	25.9%	19.4%	13.9%	11.8%	21.7%	13.3%	13.8%	19.3%	7.7%	23.7%
RCF / Debt	22.3%	8.7%	22.3%	11.5%	7.3%	6.4%	11.4%	5.3%	6.9%	10.9%	2.6%	12.2%
(FFO + Interest Expense) / Interest Expense	6.7x	5.0x	6.6x	6.2x	5.3x	5.0x	5.3x	4.6x	4.5x	13.0x	8.8x	10.6x
Debt / Book Capitalization	42.4%	52.6%	44.8%	55.2%	60.8%	65.5%	34.4%	45.5%	47.7%	45.3%	57.8%	53.3%

All figures and ratios calculated using Moody's estimates and standard adjustments. FYE = Financial year-end. LTM = Last 12 months. RUR* = Ratings under review, where UPG = for upgrade and DNG = for downgrade.
Source: Moody's Financial Metrics™

Exhibit 21

Select historical Moody's-adjusted financial data

RWE AG (consolidated)

(in EUR million)	FYE Dec-18	FYE Dec-19	FYE Dec-20	FYE Dec-21	FYE Dec-22
INCOME STATEMENT					
Revenue	14,533	14,683	13,688	24,571	38,366
EBITDA	2,414	3,731	4,605	3,453	5,501
EBIT	1,515	2,537	3,183	2,034	3,871
Interest Expense	709	651	670	642	1,166
Net income	(283)	9,245	1,899	638	4,063
BALANCE SHEET					
Net Property Plant and Equipment	12,817	19,016	17,841	19,904	23,703
Total Assets	80,513	64,005	61,578	142,226	138,502
Total Debt	26,744	14,833	14,529	21,239	25,392
Cash & Cash Equivalents	7,132	6,450	8,993	13,865	20,456
Net Debt	19,612	8,383	5,536	7,374	4,936
Total Liabilities	70,763	46,495	44,437	126,748	110,669
CASH FLOW					
Funds from Operations (FFO)	2,365	1,428	3,785	2,598	6,581
Cash Flow From Operations (CFO)	6,697	(1,600)	4,134	6,439	2,705
Dividends	1,017	574	541	744	928
Retained Cash Flow (RCF)	1,348	854	3,244	1,854	5,653
Capital Expenditures	(1,035)	(1,765)	(2,224)	(3,609)	(3,257)
Free Cash Flow (FCF)	4,645	(3,939)	1,369	2,086	(1,480)
INTEREST COVERAGE					
(FFO + Interest Expense) / Interest Expense	4.3x	3.2x	6.7x	5.0x	6.6x
LEVERAGE					
FFO / Debt	8.8%	9.6%	26.1%	12.2%	25.9%
RCF / Debt	5.0%	5.8%	22.3%	8.7%	22.3%
Debt / EBITDA	11.1x	4.0x	3.2x	6.2x	4.6x
Net Debt / EBITDA	8.9x	2.5x	1.3x	2.3x	0.9x

All figures and ratios are calculated using Moody's estimates and standard adjustments.
Source: Moody's Financial Metrics™

Endnotes

1 Our calculation of adjusted net debt already excludes mining provisions, and we do not include provisions related to the dismantling of wind farms.

REPORT NUMBER 1380419