RWE AG

Talking the talk, but will need to walk the walk

- RWE’s transition to net zero is not fully aligned with the goals of the Paris Agreement.
- Germany has yet to bring forward the closure of coal to 2030; there are major technical and financial challenges decarbonising gas with hydrogen.
- Current profitability of lignite and gas is not sustainable and RWE risks destroying value on new gas.
- However, minority shareholders may be able to engineer change.
About Carbon Tracker

The Carbon Tracker Initiative is a team of financial specialists making climate risk real in today’s capital markets. Our research to date on unburnable carbon and stranded assets has started a new debate on how to align the financial system in the transition to a low carbon economy.

www.carbontracker.org  |  hello@carbontracker.org

About the Author

Chris Moore—Senior Company Research Analyst, European Power & Utilities

Chris joined Carbon Tracker in May 2022 as Senior Corporate Research Analyst for European Power & Utilities. Chris joined from BEIS, where he advised HM Government on corporate finance as part of the Carbon Capture and Underground Storage (CCUS) team, focussed mainly on biomass. Prior to this, Chris was a Supervisory Analyst/ Director at Fitch Ratings with responsibility for European & UK power, gas, water, and waste debt issuers. Chris also has 25 years’ experience as an equity analyst specialising first in autos and later in European power, gas, and utilities, both in Italy and the UK at Morgan Stanley, JP Morgan/ Cazenove and most recently at ABN AMRO/ RBS. Chris has a BA (Hons) in Modern History from Brasenose College, Oxford.

E-mail: cmoore@carbontracker.org
Table of Contents

1. Executive Summary ........................................................................................................................................... 4
   1.1 Key Questions for Management .................................................................................................................. 5
   1.2 Key Financial and Emissions Related Metrics ......................................................................................... 5

2. Transition to Net Zero ........................................................................................................................................ 6
   2.1 Coal ........................................................................................................................................................... 7
   2.2 Gas and Hydrogen ..................................................................................................................................... 10
   2.3 Renewables ............................................................................................................................................... 11
   2.4 Scope 1-3 Emissions Reduction ............................................................................................................ 12

3. Financials & Accounting Disclosure ............................................................................................................. 13
   3.1 Capex ......................................................................................................................................................... 13
   3.2 Profitability ............................................................................................................................................... 13
   3.3 Asset Lives & Asset Impairment Tests ..................................................................................................... 15

4 Corporate Governance .................................................................................................................................. 16
   4.1 Shareholders ............................................................................................................................................. 16
   4.2 Board Members ......................................................................................................................................... 17
   4.3 ESG and Board Remuneration ................................................................................................................. 17

5. Appendix ....................................................................................................................................................... 20
   5.1 Corporate Profile ....................................................................................................................................... 20
   5.2 References ................................................................................................................................................ 20
1. Executive Summary

RWE’s transition to net zero is not fully aligned with the goals of the Paris Agreement. Germany has yet to bring forward the closure of coal to 2030 and there are major technical and financial challenges decarbonising gas with hydrogen. Current profitability of lignite and gas is not sustainable and RWE risks destroying value on new gas. However, minority shareholders may be able to engineer change.

Major progress in emissions reduction to 2020, but this has reversed since 2021

RWE plans to reduce carbon intensity 50% for Scope 1 and 2 and absolute emissions 30% for Scope 3 compared to 2019, aligning with the goals of the Paris Agreement. RWE made real progress in reducing emissions through 2020, but this has reversed since 2021. Government laws temporarily reopening mothballed plant may delay emissions reduction; RWE currently plans to run 3 GW lignite capacity in Germany after 2030.

Unlike coal, RWE has yet to decarbonise gas and conversion to hydrogen is challenging

RWE has been closing German coal but has barely started to decarbonise gas assets. With gas targeted for phaseout in Germany in 2040, RWE accepts there is a question over gas as a bridging fuel and is reviewing new build options. With hydrogen, RWE expects to run emission free gas by 2040, but there are major technical and financial obstacles delaying full conversion to hydrogen.

Lignite and gas assets currently profitable, but RWE risks destroying value on new gas

CO2 costs are financially hedged out to 2030; RWE’s lignite assets are currently profitable and cash generative. Although disclosure is limited and gas prices extremely high, the gas assets are also profitable, although this includes UK capacity payments which are likely to fall after 2025-26. RWE capex is 88% EU taxonomy eligible; this excludes up to €3bn capex on new gas and hydrogen.

Mining liabilities of €5bn funded by Government compensation and E.ON stake

RWE’s agreement with the German Government for coal phaseout includes compensation payable over 15 annual instalments of €2.6bn set against 2021 provisions for mining liabilities of €5bn. The 15% holding in E.ON, currently worth around €3bn, is intended to fund the gap. Impairment tests in coal were for €791 million in 2021 out of a group figure of €952m, mainly lignite.

Minority shareholder pressure for change, remuneration links with ESG criteria

Activist shareholder Enkraft proposed a separation of lignite and hard coal activities, arguing these weigh on RWE’s carbon footprint and valuation at the 2022 AGM. The proposal was voted down by ex-municipal shareholders citing jobs and local economy but also other shareholders on security of supply. Management remuneration and credit lines are linked to ESG criteria; some long-term incentives are related to emissions.
1.1 Key Questions for Management

- What is the impact of the temporary reopening of mothballed German coal on RWE’s phaseout plans?
- Does RWE believe there is a question mark over natural gas as a bridging fuel to 2030 and is the company reviewing new build options?
- When will RWE follow peers and start publishing quarterly carbon emissions data?
- What are the company’s plans to decarbonise capex and disclose methodology to determine Paris alignment of future capex?
- What is the level of lignite mining reserves at present and how much is expected to remain in the ground with phaseout?

1.2 Key Financial and Emissions Related Metrics

<table>
<thead>
<tr>
<th>Key Financials/RWE AG</th>
<th>Emissions Related</th>
</tr>
</thead>
<tbody>
<tr>
<td>Stock Code (Reuters)</td>
<td>RWEG.DE</td>
</tr>
<tr>
<td>Market Cap (€ bn)</td>
<td>28.1</td>
</tr>
<tr>
<td>Net Financial Debt (€ bn)</td>
<td>3.9</td>
</tr>
<tr>
<td>Enterprise Value (€ bn)</td>
<td>32.1</td>
</tr>
<tr>
<td>EV/EBITDA (x)</td>
<td>8.8</td>
</tr>
<tr>
<td>Net Fin. Debt/EBITDA (x)</td>
<td>1.1</td>
</tr>
<tr>
<td>Credit Rating (Moody’s, Fitch)</td>
<td>Baa2/BBB+</td>
</tr>
<tr>
<td>Dividend (€)</td>
<td>0.90</td>
</tr>
<tr>
<td>Dividend Yield (%)</td>
<td>2.2%</td>
</tr>
<tr>
<td>Next Results</td>
<td>Q3, 10 Nov</td>
</tr>
<tr>
<td>CO2 Emissions (mt)</td>
<td>80.9</td>
</tr>
<tr>
<td>EU ETS CO2 Price (€/t)</td>
<td>70.9</td>
</tr>
<tr>
<td>CO2 Footprint (€ bn)</td>
<td>5.7</td>
</tr>
<tr>
<td>Adjusted EV (€ bn)*</td>
<td>37.8</td>
</tr>
<tr>
<td>Adjusted EV*/EBITDA (x)</td>
<td>10.4</td>
</tr>
<tr>
<td>Fossil Fuels EBITDA (€ bn) est.</td>
<td>0.7</td>
</tr>
<tr>
<td>Adjusted EV*/EBITDA (x)</td>
<td>10.7</td>
</tr>
<tr>
<td>Net Fin. Debt/Adj EBITDA**</td>
<td>1.3</td>
</tr>
</tbody>
</table>

*EV & CO2 Footprint
**Non-fossil fuel EBITDA

Source: Bloomberg, Carbon Tracker Estimates

**Figure 1: Stock Price Chart (local currency), Absolute & Relative to MSCI Europe Utilities, 5 Year**

Source: Bloomberg
2. Transition to Net Zero

RWE aims to reach carbon net zero by 2040. RWE intends to reduce emissions per kWh by 50% for Scope 1 and 2 and absolute emissions by 30% for Scope 3 compared to 2019, aligning with the IEA’s 2050 1.5°C pathway. There are also interim targets for 2025, shown below, but no absolute emission reduction targets. By 2030, RWE intends to double generation capacity in wind energy, solar and storage technologies, increasing flexible backup power plants and electrolyzers for hydrogen production. By 2030, RWE plans to invest €50 billion gross in renewables.

**FIGURE 2: RWE PLANNED EMISSIONS (SCOPE 1, 2 & 3) REDUCTION TIMELINE, 2019-40**

With 5 GW of capacity, RWE is global no.2 in offshore wind. It will spend an average €5 bn capex gross each year for offshore and onshore wind, solar, batteries, flexible generation and hydrogen. This will be partly funded by asset rotation for €20bn, lowering the net spend to €30bn. The company intends to double capacity by 25 to 50 GW net in Europe, North America, and Asia-Pacific. Net capacity additions are planned at an average 2.5 GW per year. This includes green hydrogen with 2 GW of electrolyser capacity by 2030.
Although we don’t have the same level of disclosure as the table above for generation output by technology, it is worth noting that fossil fuels still accounted for 56% of capacity and 66% of RWE Group output in 2021. Coal and nuclear still account for 52% of RWE Group workforce.

2.1 Coal

Germany’s Coal Phaseout Act (Kohleverstromungsbeendigungsgesetz, KVBG) was passed in 2020. This provides for a plant-specific exit for lignite and tender process for the shutdown of hard coal by 2027. By end 2022, RWE should have retired 2.8 GW of lignite with further plants to follow over 2025-29. RWE will then have reduced lignite capacity 70% compared with 2018; this still leaves more than 30% of current lignite capacity operating beyond 2030.

Figure 4: RWE planned lignite closure timeline, 2020-38

Source: RWE Factbook (August 2022)
The legal framework has a coal exit by 2038, but under the coalition agreement the national coal phase-out should be brought forward to 2030. Legislative procedures must be put in place; RWE expects discussions with Government to resume next year. Like Uniper, RWE believes that if all German coal were closed by 2030, the country would need 20-40 GW of firm available capacity, most likely gas. However, this ignores the official target of closing CCGT by 2040. The national target assumes an increase in renewable energy consumption to 65% of total by 2030.

RWE must close hard coal capacity in the Netherlands in line with Dutch law by 2030. RWE is looking for compensation of €1.4bn for the closure of Eemshaven. Under the terms of the Energy Charter Treaty (ECT), this would effectively transfer the risks and costs of transition to the Dutch Government. This may change in view of the current risk to hard coal availability and prices. Coal capacity at the smaller Amercentrale ST9 plant is being converted to biomass; 237 MW of capacity at Eemshaven below is biomass; this is subsidised in the Netherlands until 2027.
The Government passed emergency laws in July 2022 to reopen 10 GW of mothballed coal plants up to March 2024 to preserve gas supplies. This includes 2.6 GW of hard coal due for closure in 2022-23. RWE is prepared to extend the life of up to 3.5 GW of coal capacity if/when the Government makes a formal request to this effect. This includes 1.9 GW lignite units recently decommissioned, are in security standby or which must be shut down in 2022. RWE is returning 900 MW of the lignite security reserve to operation in the wholesale market from October 2022 at the Government’s request. However, lignite will only run if hard coal capacity is insufficient.

In April 2022, 50-year-old Neurath A with 294 MW of capacity was taken offline. In view of the current need to conserve gas, the unit will not be dismantled but mothballed. This gives RWE the option of restarting the unit if the government or Federal Network Agency deems necessary. In September 2022, RWE is also closing 600 MW at Niederaussem E & F, currently in security standby.

---

**Figure 6: RWE Coal Capacity (MW)**

<table>
<thead>
<tr>
<th>RWE Coal Capacity (MW)</th>
<th>COD</th>
<th>Capacity</th>
<th>Decommissioning Date**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Germany</td>
<td></td>
<td>technical</td>
<td></td>
</tr>
<tr>
<td>Lignite*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neuwrath E</td>
<td>1976</td>
<td>604</td>
<td>31/12/2022</td>
</tr>
<tr>
<td>Neuwrath D</td>
<td>1975</td>
<td>607</td>
<td>31/12/2022</td>
</tr>
<tr>
<td>Weisweiler F</td>
<td>1967</td>
<td>321</td>
<td>01/01/2025</td>
</tr>
<tr>
<td>Weisweiler H</td>
<td>1975</td>
<td>656</td>
<td>01/04/2028</td>
</tr>
<tr>
<td>Weisweiler G</td>
<td>1974</td>
<td>663</td>
<td>01/04/2028</td>
</tr>
<tr>
<td>Niederaussem G</td>
<td>1974</td>
<td>628</td>
<td>31/12/2029</td>
</tr>
<tr>
<td>Niederaussem H</td>
<td>1974</td>
<td>648</td>
<td>31/12/2029</td>
</tr>
<tr>
<td>Niederaussem K</td>
<td>2002</td>
<td>944</td>
<td>31/12/2038</td>
</tr>
<tr>
<td>Neuwrath F</td>
<td>2012</td>
<td>1,060</td>
<td>31/12/2038</td>
</tr>
<tr>
<td>Neuwrath G</td>
<td>2012</td>
<td>1,060</td>
<td>31/12/2038</td>
</tr>
<tr>
<td><strong>Total Germany Lignite</strong></td>
<td></td>
<td>7,344</td>
<td></td>
</tr>
<tr>
<td>Niederaussem G</td>
<td>1970</td>
<td>295</td>
<td>01/10/2022</td>
</tr>
<tr>
<td>Niederaussem H</td>
<td>1971</td>
<td>299</td>
<td>01/10/2022</td>
</tr>
<tr>
<td>Neuwrath D</td>
<td>1973</td>
<td>292</td>
<td>01/10/2023</td>
</tr>
<tr>
<td><strong>Total Security Reserve</strong></td>
<td></td>
<td>594</td>
<td></td>
</tr>
<tr>
<td><strong>Hard Coal</strong>*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Netherlands</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Amercentrale ST9</td>
<td>1993</td>
<td>126</td>
<td></td>
</tr>
<tr>
<td>Eemshaven A</td>
<td>2014</td>
<td>672</td>
<td></td>
</tr>
<tr>
<td>Eemshaven B</td>
<td>2014</td>
<td>672</td>
<td></td>
</tr>
<tr>
<td><strong>Total Hard Coal</strong></td>
<td></td>
<td>1,470</td>
<td></td>
</tr>
<tr>
<td><strong>Total Lignite &amp; Hard Coal</strong></td>
<td></td>
<td>9,408</td>
<td></td>
</tr>
</tbody>
</table>

*Excl plants below 50 MW  
**According to coal phaseout law  
***Excl GKM 1,978 MW (minority stake)  
Source: RWE
The latter lasts up to four years. However, closures are also subject to the condition that these assets are not classified as system critical.

RWE has no intention of reviewing coal's non-core status within the Group and, in view of the need to incur additional running costs recoverable from the Government, does not expect extending coal lives to be profitable. RWE stopped importing hard coal to Germany from Russia in March 2022 in response to sanctions. It wrote off the value of the coal supply contract as a non-operating item in H1 2022 for €750m.

The Dutch Government decided in June 2022 to run coal at full capacity in the coming months to ensure that there is enough gas left to heat homes this winter. The Dutch decision, which goes against government policy of limiting hard coal usage to 35% of maximum output, came at the same time as Germany said it would fire up coal to conserve gas for central heating. This change adds pressure on RWE to drop claims for compensation, as Uniper has recently done.

2.2 Gas and Hydrogen

RWE has the second largest gas fleet in Europe, shown below. Power generation from natural gas is targeted for phaseout in Germany in 2040.

Assuming a 30-year asset life for CCGT, RWE should have retired 2.3 GW capacity at Gersteinwerk G-I & K1 and Emsland B & C. Similarly, RWE should consider retiring capacity at Little Barford, Didcot B & Moerdijk which are all shortly approaching the term of 30-year asset lives. Gersteinwerk F & G stopped participating in the wholesale market in October 2020 and have qualified for the capacity reserve with 710 MW over October 2022-September 2024 to safeguard grid stability.

RWE accepts that there is a question mark over natural gas as a bridging fuel to 2030 and is reviewing new build options.

RWE intends to decarbonise CCGT with hydrogen, a faster preferred option particularly for Germany, or with carbon capture and underground storage (CCUS), a longer-term but potentially more appropriate option for the UK and Netherlands. This includes bioenergy carbon capture and storage (BECCS) at Pembroke & Eemshaven. CCS may be cheaper than hydrogen in some countries. However, both routes need clear regulatory frameworks with adequate remuneration.

A new German electricity market design will look at capacity mechanisms for new gas-fired power plants to run on hydrogen. Policy plans are to be converted into legislative proposals starting in 2022-23. The Government is looking at subsidies to make green hydrogen competitive with grey. RWE has EU funding for four hydrogen projects for 100 MW by 2024 and 300 MW by 2026. Carbon Tracker analysis shows that green hydrogen may be competitive with natural gas for electricity by the early-to-mid-2030’s.

RWE doubled down on gas with hydrogen with the acquisition in June 2022 of Vattenfall’s Magnum 1.4 GW CCGT facility for €500m (cost €357/kW). Commissioned in 2013, Magnum is equipped to cofire up to 30% with hydrogen; the press release claims that it may be convert Magnum to full hydrogen operation by the end of the decade. However, it remains to be seen how competitive this is in practice. As with Uniper, we expect major technical and financial challenges to delay the conversion of European CCGT to hydrogen. An additional factor is grid constraints to hydrogen.
The German government approved in July 2022 an Easter Package with a commitment to a system based on renewables and massive increase in wind, solar, and grid deployment. Germany is planning an increase in renewables to 80% of electricity consumption by 2030 against 42% in 2021. This includes installing 10 GW new onshore wind energy each year from 2025, with an increase in annual auction volumes to up to 12 GW to achieve this. The package also raised offshore wind targets to 30 GW by 2030, 40 GW by 2035 and at least 70 GW by 2045.

Grid planning will be aligned with the addition of new grid expansion and optimization projects. To mitigate the impact of rising electricity prices on businesses and households, the Government has scrapped the EEG levy previously paid by electricity consumers and has begun funding renewable energy projects from the federal budget. The Government has committed to prioritizing offshore wind in maritime spatial planning, shortening permitting and hiring more staff in permitting authorities.
It remains to be seen how many additional onshore and offshore sites become available, but RWE is hoping for a reasonable share of the €250bn spend and is in the process of hiring origination staff across seven regional offices. Overall, there may be supply chain constraints affecting the speed or delivery of the renewables build.

The UK made a similar announcement in April with an increase in the offshore wind target in 2030 from 40 GW to 50 GW, accompanied by faster permitting lead times.

2.4 Scope 1-3 Emissions Reduction

We show RWE’s track record in reducing Scope 1 emissions below. Although RWE made steady progress in reducing emissions over 2017-20, this has been down to an improvement in the overall fuel mix. This has more than offset lignite and coal emissions which have seen an increase in carbon intensity, due we believe to relatively stronger lignite load factors compared with hard coal. It is difficult to gauge progress on a timely basis; RWE only discloses carbon emissions data at full year.

Scope 2 and 3 emissions were 2.7mt (2.6 mt in 2020) and 22.7mt (18.9mt in 2020) respectively in 2021.

Figure 8: RWE Carbon Emissions Track Record (mt), 2017-21

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>CO2 Emissions (mt)</td>
<td>80.9</td>
<td>67.0</td>
<td>88.1</td>
<td>118.0</td>
<td>131.8</td>
</tr>
<tr>
<td>of which lignite &amp; coal</td>
<td>55.9</td>
<td>46.7</td>
<td>61.8</td>
<td>79.4</td>
<td>NA</td>
</tr>
<tr>
<td>Group Output (TWh)</td>
<td>160.8</td>
<td>141.2</td>
<td>153.2</td>
<td>176.0</td>
<td>200.2</td>
</tr>
<tr>
<td>of which lignite &amp; coal</td>
<td>53.1</td>
<td>42.8</td>
<td>62.4</td>
<td>94.6</td>
<td>103.5</td>
</tr>
<tr>
<td>Carbon Intensity (g/KWh)</td>
<td>503</td>
<td>474</td>
<td>575</td>
<td>670</td>
<td>658</td>
</tr>
<tr>
<td>of which lignite &amp; coal</td>
<td>1,054</td>
<td>1,092</td>
<td>990</td>
<td>839</td>
<td>NA</td>
</tr>
</tbody>
</table>

Source: RWE
3. Financials & Accounting Disclosure

3.1 Capex

RWE has said that future capex must be Paris aligned. However, we understand that RWE intends to build 2 GW of new gas capacity, included in flexible generation below. RWE expects 90% of capex to be EU taxonomy eligible from 2022. Around 50% of EBITDA (wind, solar and hydro) was taxonomy eligible in 2021. Based on the substantial wind build, RWE is targeting €5bn core EBITDA by 2030 compared with €3.7bn in 2021.

**Figure 9: RWE Capex Breakdown, 2021-30**

![Image of Capex Breakdown]

Source: RWE

3.2 Profitability

Following the asset swap with E.ON, RWE set up a new coal and nuclear reporting line in 2020. This includes lignite mining. A closure of nuclear in 2022 should give a better picture of lignite EBITDA, with RWE guiding to a range of €0-200m. It expects lignite to remain cashflow positive, with efficiency improvements and EBITDA funding annual capex at around €150m. RWE is guiding to a coal and nuclear 2022 EBITDA of €650-750m, lower than 2021 as a result of the closure of some lignite and potentially all nuclear capacity by year end, partly offset by an increase in output and cost savings.

RWE has a financial hedge for CO2 costs out to 2030, though it still needs to buy allowances for unhedged (open or implicit fuel hedged) positions. With lignite load factors higher than nuclear and substantially higher than hard coal in H1 ’22 implying strong profitability, we believe that even with reactivation costs lignite 2023 EBITDA could be higher than €200m.

**Figure 10: RWE Coal & Nuclear EBITDA (€m), 2020-H1 2022**

<table>
<thead>
<tr>
<th>RWE Coal &amp; Nuclear (€m)</th>
<th>2021</th>
<th>2020</th>
<th>H1 '22</th>
<th>H1 '21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>5,027</td>
<td>3,929</td>
<td>2,227</td>
<td>1,953</td>
</tr>
<tr>
<td>Reported EBITDA</td>
<td>889</td>
<td>559</td>
<td>501</td>
<td>545</td>
</tr>
<tr>
<td>EBITDA Margin</td>
<td>17.7%</td>
<td>14.2%</td>
<td>22.5%</td>
<td>27.9%</td>
</tr>
<tr>
<td>Capex</td>
<td>259</td>
<td>183</td>
<td>86</td>
<td>114</td>
</tr>
</tbody>
</table>

Source: RWE
Gas earnings are not broken out but reported along with hydro and biomass. However, gas represents more than 90% capacity and nearly 90% output of this business. Gas earns capacity payments in the UK, by far RWE’s biggest market, though we expect these to fall from 2025-26. With increased spark spreads and contribution from peaker units, we believe gas is probably the biggest single contributor to the figures below.

RWE is guiding to hydro, biomass and gas EBITDA in 2022 of €1.4-1.7bn, driven by stronger short term asset optimisation (spot, balancing markets and intraday trading), higher hedged generation margins and a first-time contribution from the newly acquired Magnum CCGT plant.

However, in view of Uniper’s recent difficulties, RWE has changed its hedging strategy to avoid having to buy back volumes to compensate for gas supply interruptions. This means that all German CCGT output is unhedged, eliminating the risk of expensive buybacks but at the same time exposing earnings to commodity price volatility. Visibility of gas earnings may also be affected by the Act on Maintenance of Substitute Power Stations (EKBG) until March 2024 banning gas for electricity generation in the event of gas shortages.

**Figure 11: RWE Hydro, Biomass & Gas EBITDA (€m), 2020-H1 2022**

<table>
<thead>
<tr>
<th>Hydro, Biomass &amp; Gas (€m)</th>
<th>2021</th>
<th>2020</th>
<th>H1 ’22</th>
<th>H1 ’21</th>
</tr>
</thead>
<tbody>
<tr>
<td>Revenues</td>
<td>6,677</td>
<td>4,203</td>
<td>4,114</td>
<td>1,869</td>
</tr>
<tr>
<td>Reported EBITDA</td>
<td>731</td>
<td>621</td>
<td>755</td>
<td>297</td>
</tr>
<tr>
<td>EBITDA Margin</td>
<td>10.9%</td>
<td>14.8%</td>
<td>18.4%</td>
<td>15.9%</td>
</tr>
<tr>
<td>Capex</td>
<td>300</td>
<td>269</td>
<td>151</td>
<td>68</td>
</tr>
</tbody>
</table>

Source: RWE

RWE breaks out flexible generation gross margin below. Again, we believe that the bulk of this is gas. The UK government is currently consulting on a potential redesign of the UK market, including the capacity market and will consult in 2022 on bringing the UK emissions trading system into line with the legally binding net-zero target by 2050. This implies a reduction in capacity market revenues for gas in future.

**Figure 12: RWE Generation Gross Margin by Business**
3.3 Asset Lives & Asset Impairment Tests

RWE depreciates thermal power plants over 6-40 years and mining facilities over 3-25 years. In relation to lignite mining and generation, the decommissioning data from the Act on Coal Phaseout are taken into consideration in determining the useful asset lives.

Impairment tests in coal were for €791 million in 2021 (€1.8bn 2020) out of a group figure of €952m. This was due to changed market conditions and specification of the lignite phaseout plans. €579 million was related to Garzweiler (Niederassem K, Neurath F & G and Garzweiler opencast mine and refining plants-recoverable amount: €0.8 billion), €114 million to Hambach (recoverable amount: – €0.7 billion) and €98 million to Inden (recoverable amount: – €0.4 billion). Impairments of €231 million were also recognised on hard coal capacity based on its phaseout.

Projections for the next three years are extrapolated based on long-term assumptions about electricity, coal, natural gas and CO2 prices and planned service lives. The outcome of these valuations is dependent on the estimates of future cash flows, discount rates, rates of growth and other assumptions employed. The measurement is therefore subject to considerable uncertainties.

Provisions for mining damage amounted to €4,993m at end 2021, discounted at a nominal 2.1%. RWE does not have a figure for how much lignite stays in the ground at asset life end.
4 Corporate Governance

4.1 Shareholders

Although not shown below, the Association of Municipal Shareholders (VKA) representing Dortmund, Duisburg and Essen, is de facto RWE's largest shareholder with a stake of 14.1%. Activist shareholder Enkraft has a relatively small holding in RWE of 0.5m shares and proposed a separation of RWE's lignite and hard coal activities, arguing that these weigh on the company’s carbon footprint and valuation at the 2022 AGM. The proposal needed 75% of votes to be accepted but was voted down by VKA citing jobs and the local economy and other shareholders on the grounds of security of supply.

RWE’s opposition to a spinoff of lignite is based on a loss of flexibility to pursue alternatives such as the foundation model under discussion with the German Government while a spinoff requires consent of national and local government. It is certainly true that a spinoff alone would not reduce RWE’s carbon footprint. RWE also believes that financing a pure lignite company via capital markets would be challenging, potentially threatening growth capex in renewables. The strong recent share price performance may be a further disincentive for equity holders to push for change.

Our sense is that because of the current political priority of security of supply and better affordability, it is unlikely that national and local government would look at a spinoff today. It is also unlikely that a pure lignite company would be easily financeable without Government support; Uniper has just had a government bailout. However, several of RWE’s assertions do not stand up to scrutiny.

We believe free cashflow from lignite is currently around €100m a year. This is a very small contribution to cashflow and 2021 wind capex (gross cash investments) of €3.4bn. This is hardly threatening growth capex. RWE’s view that a spinoff “would create substantial uncertainty for the affected employees and regions” is also questionable. PGE is spinning off its coal business without any such qualms, but critically under Government ownership and with political support (assuming security of supply does not delay the operation).

Enkraft has also argued that the supervisory board was not sufficiently representative and unsuccessfully proposed new members more aware of the need of transition to net zero.
4.2 Board Members

The senior management team comprises:

Dr. Markus Krebber, CEO. Also responsible for Energy Transition & Regulatory Affairs, Group Communications & Public Affairs, Legal, Compliance & Insurance, Mergers & Acquisitions, Corporate Transformation and Strategy & Sustainability.

Dr. Michael Muller, CFO. Also responsible for Finance & Credit Risk, Tax, Accounting, Controlling & Risk Management, Investor Relations.

Dr. Zvezdana Seeger, Chief Human Resources Officer. Also responsible for Services & Analytics, Employee Relations, People Development & Talent Attraction, Information Technology, Internal Audit & Cyber Security.

The supervisory board comprises 20 members, of which 10 are shareholder representatives and 10 are employee representatives. The board is supported by 6 standing committees.

4.3 ESG and Board Remuneration

For the management board, short term incentives are related to ESG criteria; long term incentives are more explicitly related to emissions.
**FIGURE 14: RWE MANAGEMENT BOARD SHORT TERM INCENTIVE SCHEME**

Short-term incentive scheme is based on earnings target and individual performance

- **Target achievement**
  - Company bonus: 0% - 150% based on adjusted EBIT
  - Individual performance: factor 0.8 - 1.2
- **Bonus pay-out amount**
  - Overall cap at 1.5x

- Individual targets
- Collective performance of Executive Board
- Corporate Responsibility/ESG targets and employee motivation
- Allocated between the other three components at the discretion of the SD

✓ Reflects common market practice
✓ Multiplier ensures flexibility to adjust pay-outs according to individual performance

Source: RWE

**FIGURE 15: RWE MANAGEMENT BOARD LONG TERM INCENTIVE SCHEME**

Long term incentive (LTI) scheme share-based with four year vesting period linked to three KPIs

- **Target**
  - Capital market performance
  - Financial performance
  - ESG performance
- **KPI**
  - Relative Total Shareholder Return
  - Adjusted net income
  - CO2-emissions factor
- **Weighting**
  - 33%
  - 33%
  - 33%

✓ LTI scheme closely linked to strategic goals
✓ LTI scheme linked to three KPIs
✓ Targets measured over a three year performance period with one year additional holding period (four year vesting period)

Source: RWE

RWE scores highly with ESG Rating Agencies—please see below. S&P’s figure below for 2020 should read 63, not 54.
Figure 16: RWE ESG Rating Agency Scores

Source: RWE Credit and ESG Investor Update, June 2022

RWE has become a regular issuer of green bonds, for €1.85bn in 2021 and €2bn to date this year to fund the renewables build. The 2022 issuance was split equally maturing 2026 with a coupon of 2.2% and 2030 with a coupon of 2.9%. Similarly, RWE raised €2bn with a capital increase in August 2020 to fund capex in wind and solar as well as the acquisition of Nordex. First call for €537m of hybrids is due in April ‘25 and March ‘26.

In view of recent volatility in energy prices and related rise in liquidity requirements to hedge forward contracts, RWE secured three credit lines in Q1 ’22, increasing financing headroom to €8bn until 2024. The conditions of all three lines are linked to sustainability criteria. These include the share of renewables in RWE’s generation portfolio, the CO2 intensity of capacity and percentage of capex classified as sustainable in accordance with the EU taxonomy regulation. The latter figure is currently 88%; RWE is targeting more than 90% over 2021-30.

Out of nine criteria, RWE only partially meets CA100+ criteria for four below:

- Short (up to 2025) and medium (2026-35) term GHG reduction targets; not aligned with the goal of limiting global warming to 1.5C.
- Capital alignment; capex is not aligned with the goals of the Paris Agreement.
- Climate governance.
- TCFD disclosure.
5. Appendix

5.1 Corporate Profile

RWE AG is a German multinational energy company based in Essen. The company is the world’s number two in offshore wind and number two gas fleet in Europe. RWE spun off renewable energy, grid and retail into a separate company, Innogy SE in 2016. The restructuring was caused by a need to reduce exposure to nuclear decommissioning costs due to Government policy of closing all nuclear capacity by 2022. In July 2020, RWE completed a major asset swap with E.ON with the international renewables business of E.ON and innogy transferred to RWE.

5.2 References

Fortum Corporate Profile/ Carbon Tracker Nov 2021
Disclaimer

Carbon Tracker is a non-profit company set up to produce new thinking on climate risk. The organisation is funded by a range of European and American foundations. Carbon Tracker is not an investment adviser and makes no representation regarding the advisability of investing in any particular company or investment fund or other vehicle. A decision to invest in any such investment fund or other entity should not be made in reliance on any of the statements set forth in this publication. While the organisations have obtained information believed to be reliable, they shall not be liable for any claims or losses of any nature in connection with information contained in this document, including but not limited to, lost profits or punitive or consequential damages. The information used to compile this report has been collected from a number of sources in the public domain and from Carbon Tracker licensors. Some of its content may be proprietary and belong to Carbon Tracker or its licensors. The information contained in this research report does not constitute an offer to sell securities or the solicitation of an offer to buy, or recommendation for investment in, any securities within any jurisdiction. The information is not intended as financial advice. This research report provides general information only. The information and opinions constitute a judgment as at the date indicated and are subject to change without notice. The information may therefore not be accurate or current. The information and opinions contained in this report have been compiled or arrived at from sources believed to be reliable and in good faith, but no representation or warranty, express or implied, is made by Carbon Tracker as to their accuracy, completeness or correctness and Carbon Tracker does also not warrant that the information is up to date.
To know more please visit:
www.carbontracker.org
@carbonbubble