Research Update:

EnBW Energie Baden-Wuerttemberg AG 'A-' Ratings Affirmed; Outlook Stable

June 2, 2021

Rating Action Overview

- EnBW Energie Baden-Wuerttemberg (EnBW) will enter an intensive investment cycle focusing mostly on low-risk grid projects and increasing its renewable capacity, which we believe will help solidify the group's position as one of the European energy transition leaders.
- The increase in capital expenditure (capex) will mean higher leverage, but we expect EnBW will post funds from operations (FFO) to debt of about 21%, which we consider consistent with the current rating.
- We therefore affirmed our 'A-' long-term issuer credit rating on EnBW.
- The stable outlook indicates our expectation that EnBW's regulated business and low-risk renewable portfolio, which we forecast will account for 75%-80% of group EBITDA by 2023, will translate into stable and sustainable cash flow streams, leading to FFO to debt of about 21% over the next two years. The stable outlook also reflects EnBW's commitment to an 'A-' credit rating.

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Rating Action Rationale

We see integrated utility EnBW as well positioned amid the European energy transition, with a business mix that is proving resilient to economic downturns. EnBW continues to reshape its business mix, with regulated grids and subsidized and long-term contracted renewable generation fully compensating for a declining share of conventional power generation and trading. Notably EBITDA from the latter was 80% lower in 2020 than 2012. EnBW's current business mix sees 14% of EBITDA come from conventional generation and trading, 46% from grids, 29% from renewables, and 11% from sales, which has allowed it to remain resilient during the COVID-19 pandemic. We expect EnBW to continue accelerating the expansion of its renewable segment and adapting its electricity grid to ensure security of supply amid an evolving energy mix and electricity flows. We forecast about 45%-50% of EBITDA will come from regulated grids and about 30% from renewable generation by 2025. This will mean 80% of EBITDA will come from low-risk business segments, from 75% in 2020, with the remainder through digital activities and supply. In our view, this positions EnBW ahead of the curve in the energy transition, which currently provides support to the 'A-'rating (see "The Energy Transition And The Diverging Credit Path For European Utilities," published Feb. 16, 2021, on RatingsDirect).

EnBW's integrated position provides diverse investment opportunities amid the energy transition. We believe that the acceleration of the energy transition provides ample stimulus to EnBW's core business, which we see as credit supportive because such projects represent large, secured, or long-term, contracted investments. We also think that EnBW's integrated position gives certain advantages compared to pure renewable or regulated players, since it allows the company to selectively allocate capital to a diverse range of projects with the most favorable returns, without dependence on a single source of growth. We anticipate investments of €12 billion over 2021-2025, out of which €9.6 billion corresponds to growth projects. We forecast EnBW's average capex to EBITDA ratio will be slightly above 90% over 2021-2023, significantly above the sector median of about 60%. We expect 60% of EnBW's capex will be allocated to electricity distribution grids and renewable projects. On the grids side, investments mainly include the expansion of the electricity transmission grid (Suedlink and Ultranet) and adaptation of electricity distribution grid to decentralized generation to guarantee security of supply. In the renewables segment, EnBW has secured a pipeline of over 5 gigawatts (GW) of new solar and on and offshore wind capacity. We see limited additional onshore wind projects in Germany due to a sluggish permitting process. In contrast, we expect EnBW to mostly add solar capacity in Germany due to smoother permitting.

We factor the increasing share of minority shareholdings in our rating triggers for EnBW. On Feb. 17, 2021, we lowered our minimum FFO to debt trigger for EnBW to 19% from 20% to maintain the 'A-' rating, reflecting its leadership amid the energy transition and more defensive business risk profile (see "Ratings On Six European Integrated Utilities Affirmed Amid Accelerated Energy Transition; One Outlook Now Negative"). Excluding consolidation effects from minorities, which we believe is a better representation of cash flow available to repay debt, we estimate this was equivalent to about 18% FFO to debt on a proportional basis at the end of the previous fiscal year (2019). However, with the recent start of operations at Hohe See and Albatros, in which EnBW owns about 50.1% stakes respectively and that together generate about €160 million in FFO, the share of minorities in consolidated FFO is increasing. We calculate the difference between the proportional ratio and the consolidated one at 300 basis points on average over the next two-to-three years. Consequently, we believe EnBW will need to maintain consolidated FFO to debt of about 21% for the 'A-' rating, which corresponds to an unchanged proportional FFO to debt of about 18%. Our view of EnBW's leadership position within the energy transition remains unchanged.

We see EnBW's risk-sharing strategy as prudent. Despite our view of the minority shareholdings' effects on FFO, we recognize that risk sharing is a central aspect of EnBW's project development strategy. We see this capital allocation strategy for risk diversification via collaboration as reflective of the group's prudent risk management because it reduces concentration risk in a certain project and allows for project and capital diversification. In addition, these projects have low leverage, which also mitigates the risk of depending on a certain project.

Capex intensification will increase leverage, but we expect EnBW will post FFO to debt of about 21%, which we consider consistent with the current rating. We forecast cash flow deficits on average of about €720 million-€730 million in 2021 and €570 million-€580 million in 2022, which will result in funding needs and therefore higher leverage. However, we forecast EnBW's FFO to debt at 21% on a consolidated basis over the next two years, since regulated asset base additions and increasing earnings from renewable projects, as well as smart energy solutions, provide EBITDA and FFO support.

EnBW's power mix will become greener despite it being unable to shut down most of its coal capacity over the short-term. EnBW targets to increase its on and offshore wind capacity to 4GW and solar capacity to 1.2GW by 2025, which should translate into more than 50% of generation capacity coming from renewables, compared with 40% in 2020. EnBW will shut down its last nuclear power plant by 2022 as part of the German nuclear phase-out plan. By 2025, the remaining 50% of capacity represents thermal power plants. We don't expect the company to decommission any of its major coal plants in the short term given that they are deemed system relevant by regulator Bundesnetzagentur, and therefore are not eligible to be retired under the German tender scheme (see "The Path To Germany's Coal Exit Has Diverging Credit Implications For Utilities," published Nov. 16, 2020).

As subsidy-free renewable capacity gains relevance in the consolidated generation mix, EnBW will need to manage its power purchase agreement (PPA) exposure. We expect PPAs to be more relevant as EnBW expands its capacity on subsidy-free tenders and demand for renewable PPAs increases. We believe that this will call for prudent and standardized PPA management to mitigate potential price and volume risks, particularly given the renewable space is becoming crowded in Europe and PPA prices are being pushed down by competition.

Outlook

The stable outlook on EnBW reflects our expectation that its regulated business and low-risk renewable portfolio, which we forecast will account for 75%-80% of EBITDA by 2023, will translate into stable and sustainable cash flows. We anticipate FFO to debt will remain at about 21% over the next two years, corresponding to proportional FFO to debt of 18% (excluding earnings owed to minority holdings).

We expect minority shareholdings to account for an increasing share of EBITDA, resulting from the start of operations at Hohe See and Albatross, in which EnBW owns 50.1% stakes. In addition, we forecast that increasing capex, coupled with the expiration of subsidized renewable generation, will result in consolidated FFO to debt of 20% by 2023, which could correspond to temporarily below 18% excluding minorities. However, we take comfort from 85% of EnBW's capex being allocated to regulated grids and low-risk renewable generation until 2025, which translates into low execution risk and foreseeable returns. In addition, the outlook reflects our opinion that EnBW is committed to the current 'A-' rating, and that it has enough tools to protect proportional FFO to debt of about 18%.

Downside scenario

We could lower our rating if we believe that EnBW will post consolidated FFO to debt consistently below 21%, which corresponds to 18% on a proportional basis. This could occur, for example, due to a change in the company's financial policy, underperformance of the supply business, or a sharp and continued decline in financial assets covering pension and nuclear liabilities. We could also lower the rating if we no longer assume EnBW would receive support from the State of Baden-Wuerttemberg.

Upside scenario

Rating upside is currently limited, since we believe it would require substantial improvement of EnBW's credit metrics compared with our current base-case scenario. This implies consolidated FFO to debt sustainably above 23%, corresponding to 20% on a proportional basis, and gradual business risk profile strengthening, which we believe could result from increasing the EBITDA share from regulated or long-term contracted activities.

Company Description

EnBW is one of the leading vertically integrated utilities in Germany. The group is principally engaged in electricity generation and trading, as well as the operation of electricity grids. Its gas activities include gas storage, gas trading, and portfolio management, while the downstream business covers the transmission, distribution, and sale of gas. In addition to its traditional EnBW brand, the group serves its German household and industrial customers under the Yello and Naturenergie labels, targeting different market segments. Under its Strategy 2025, EnBW aims to continue positioning its business mix toward less volatile renewable generation and stable grid operations (currently at 27% and 43% of EBITDA, versus 10% and 33% in 2012). EnBW already achieved its 2020 strategy one year ahead of schedule.

EnBW is predominantly active in Germany (above 85% of EBITDA), where the focus of its operations is the State of Baden-Wuerttemberg, the center of the country's manufacturing and engineering industry. The group is also the majority shareholder of Stadtwerke Duesseldorf AG (not rated). In addition, EnBW has operations in Sweden, Denmark, the Czech Republic, Switzerland, and Turkey.

The State of Baden-Wuerttemberg and Zweckverband Oberschwabische Elektrizitatswerke, an association of municipalities in Baden-Wuerttemberg, each own 46.75% of EnBW. The remaining shares are held by several associations of municipalities in Baden-Wuerttemberg and private investors through a free float.

Our Base-Case Scenario

Assumptions

- German GDP growth of 3.2% in 2021 and 3.7% in 2022.
- A business mix trending toward 80% of EBITDA coming from regulated, system-critical infrastructure and contracted or subsidized renewable generation.
- EBITDA margins supported by an organizational focus on efficiency.
- Capex of €2.7 billion in 2021 and €2.7 billion in 2022. We expect close to 80% of EnBW's capex to be used for growth purposes.
- Dividends received from equity investments of about €120 million per year, which we add to EBITDA.
- We assume dividend distributions of €510 million-€520 million in 2021 and €570 million-€580 million in 2022.
- Hybrid issuances of €1 billion in 2021 to refinance the existing €1 billion of hybrids callable this

year. Lower refinancing costs provide some support to FFO.

- 90%-100% of power generation hedged for 2021 and 70%-90% for 2022. We assume power prices of €45 per megawatt hour (/MWh) in 2021 and €47/MWh in 2022 for unhedged generation.
- Protracted low interest rates still resulting in increased nuclear and pension liabilities.

Key metrics

EnBW--Key Metrics*

	--Fiscal year ended Dec. 31--				
(Mil. €)	**2019a**	**2020a**	**2021e**	**2022f**	**2023f**
EBITDA	2,303.00	2,934.50	2,900-3,000	3,000-3,100	3,000-3,100
Funds from operations (FFO)	1,689.80	2,514.90	2,500-2,600	2,600-2,700	2,650-2,750
Capital expenditure	1,920.60	2,158.70	2,700-2,800	2,700-2,800	3,000-3,100
Free operating cash flow (FOCF)	(1,131.2)	(947.9)	(700-800)	(500-600)	(800-900)
Dividends	354.5	432.8	510-520	570-580	580-590
Debt	10,735.70	12,033.60	12,200-12,300	12,500-12,600	13,400-13,500
Debt to EBITDA (x)	4.7	4.1	4.1-4.2	4.1-4.2	4.4-4.5
FFO to debt (%)	15.7	20.9	About 21	About 21	20-21

*All figures adjusted by S&P Global Ratings. Metrics in this table are calculated on a consolidated basis a--Actual. e--Estimate. f--Forecast.

Liquidity

We assess EnBW's overall liquidity as strong. This reflects our expectation that the group's available liquidity sources, including reported cash and unrestricted securities, available credit lines, and cash flow from operations, will cover expected liquidity uses by about 1.75x over the next 12 months, and 1.0x over the next 24 months.

Our assessment is reinforced by our view of EnBW's prudent risk management, reflected in its commitment and track record of retaining a strong liquidity position. We also take into consideration the group's strong standing in the financial markets, reflected in its diverse sources of funding. For example, the group's €1 billion senior bond issuance in February 2021 or the €1.5 billion sustainable syndicated loan facility issued in June 2020, in addition to the company's hybrid bonds.

Liquidity sources include:

- About €3.8 billion of unrestricted cash at March 31, 2021.
- €2.4 billion undrawn credit lines maturing beyond 12 months.
- About €2.4 billion of cash flow from operations.

Liquidity uses include:

- €1.6 billion of debt maturing within 12 months, including €1 billion of hybrid debt optionally callable, and €260 million maturing in the subsequent 12 months.

- About €2.8 billion of capex over the next 12 months.
- Our assumption of annual dividend payments of €500 million–€550 million.
- EnBW's next significant maturity is the €1 billion senior bond, due 2025. However, the company has the option to call its €974 million outstanding hybrid bonds by 2022, which would add to liquidity uses that year.

In addition to its cash balances, EnBW had access to about €6.2 billion in marketable securities at March 31, 2021, to cover pensions and nuclear provisions.

Covenants

We understand there are no restrictive covenants in the group's debt documentation.

Ratings Score Snapshot

Issuer Credit Rating: A-/Stable/A-2

Business risk: Strong

- Country risk: Very low
- Industry risk: Low
- Competitive position: Strong

Financial risk: Significant

- Cash flow/Leverage: Significant

Anchor: bbb

Modifiers

- Diversification/Portfolio effect: Neutral (no impact)
- Capital structure: Neutral (no impact)
- Liquidity: Strong (no impact)
- Financial policy: Neutral (no impact)
- Management and governance: Satisfactory (no impact)
- Comparable rating analysis: Positive (+1 notch)

Stand-alone credit profile: bbb+

Likelihood of government support: Moderate (+1 notch from SACP)

Related Criteria

- General Criteria: Hybrid Capital: Methodology And Assumptions, July 1, 2019
- General Criteria: Group Rating Methodology, July 1, 2019
- Criteria | Corporates | General: Corporate Methodology: Ratios And Adjustments, April 1, 2019

- Criteria | Corporates | General: Reflecting Subordination Risk In Corporate Issue Ratings, March 28, 2018
- General Criteria: Methodology For Linking Long-Term And Short-Term Ratings, April 7, 2017
- General Criteria: Rating Government-Related Entities: Methodology And Assumptions, March 25, 2015
- Criteria | Corporates | General: Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Dec. 16, 2014
- Criteria | Corporates | Industrials: Key Credit Factors For The Unregulated Power And Gas Industry, March 28, 2014
- General Criteria: Methodology: Industry Risk, Nov. 19, 2013
- Criteria | Corporates | General: Corporate Methodology, Nov. 19, 2013
- Criteria | Corporates | Utilities: Key Credit Factors For The Regulated Utilities Industry, Nov. 19, 2013
- General Criteria: Country Risk Assessment Methodology And Assumptions, Nov. 19, 2013
- General Criteria: Methodology: Management And Governance Credit Factors For Corporate Entities, Nov. 13, 2012
- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011
- General Criteria: Stand-Alone Credit Profiles: One Component Of A Rating, Oct. 1, 2010

Related Research

- Ratings On Six European Integrated Utilities Affirmed Amid Accelerated Energy Transition; One Outlook Now Negative, Feb. 17, 2021
- The Energy Transition And The Diverging Credit Path For European Utilities, Feb. 16, 2021
- The Path To Germany's Coal Exit Has Diverging Credit Implications For Utilities, Nov. 16, 2020

Ratings List

Ratings Affirmed	
EnBW Energie Baden-Wuerttemberg AG	
Issuer Credit Rating	A-/Stable/A-2
Junior Subordinated	BBB-
Commercial Paper	A-2
EnBW International Finance B.V.	
Senior Unsecured	A-
Commercial Paper	A-2

S&P Global Ratings' rating categories is contained in "S&P Global Ratings Definitions" at https://www.standardandpoors.com/en_US/web/guest/article/-/view/sourceId/504352 Complete ratings information is available to subscribers of RatingsDirect at www.capitaliq.com. All ratings affected by this rating action can be found on S&P Global Ratings' public website at www.standardandpoors.com. Use the Ratings search box located in the left column. Alternatively, call one of the following S&P Global Ratings numbers: Client Support Europe (44) 20-7176-7176; London Press Office (44) 20-7176-3605; Paris (33) 1-4420-6708; Frankfurt (49) 69-33-999-225; Stockholm (46) 8-440-5914; or Moscow 7 (495) 783-4009.