CREDIT OPINION
2 August 2016

Update

Rate this Research

RATINGS

Bulgarian Energy Holding EAD

Domicile	Bulgaria
Long Term Rating	Ba1
Type	LT Corporate Family Ratings
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

Velina Karadzhova 44-20-7772-5478
Analyst
velina.karadzhova@moodys.com

Andrew Blease 44-20-7772-5541
Associate Managing Director
andrew.blease@moodys.com

Bulgarian Energy Holding EAD

Credit Opinion Update

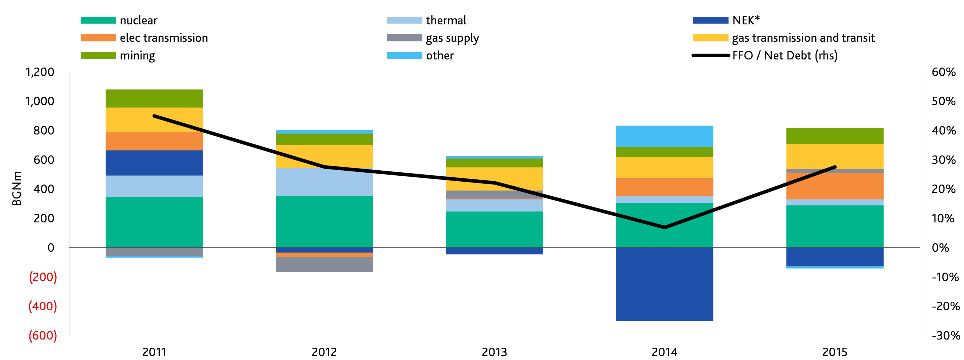
Summary Rating Rationale

Bulgarian Energy Holding's (BEH) Ba1 corporate family rating (CFR) reflects (1) the group's dominant position within the electricity generation industry in Bulgaria, which is an exporter of power to the wider Balkan region; (2) its improving financial profile as a result of deficit reduction measures put in place in August 2015; and (3) its ownership of Bulgaria's main gas transit and transmission and electricity transmission assets.

However, the rating is constrained by (1) the volatile earnings profile of the group which limits cash flow visibility; (2) the uncertainty with respect to full liberalisation of the wholesale power market in Bulgaria and its impact on BEH; (3) the relatively un-transparent nature of the regulation of the gas and electricity transmission assets and the bilateral gas transit contract and (4) weak liquidity management.

The rating incorporates three notches of uplift to BEH's standalone credit quality, expressed as a baseline credit assessment (BCA) of b1, to reflect the high likelihood that the Government of Bulgaria, BEH's 100% owner, would step in with timely support to avoid a payment default of BEH if this became necessary.

Exhibit 1
Significant earnings volatility driven by unsettled regulatory environment



*NEK – Natsionalna Elektricheska Kompania (National Electric Company), acting as a public electricity supplier
Source: Company data; Moody's Financial Metrics

Credit Strengths

» Competitive generation base in export driven market should support generation earnings over the medium term

» Improving financial profile supported by deficit reduction measures introduced in 2015

» 100% government ownership and ownership of strategic energy infrastructure provides three notches of rating uplift

Credit Challenges

» Unsettled regulatory environment with some political intervention has caused material earnings volatility

» Full electricity market liberalisation poses significant uncertainty on the trajectory of generation earnings

» Liquidity management practices are credit negative given the volatile earnings profile

Rating Outlook

The stable outlook reflects the fact that, while BEH's standalone credit profile may be pressured over the short to medium term, the strategic role of the company in the Bulgarian energy sector and the oversight and support given by the Government would be supportive of BEH's overall financial status. Moody's notes the letter of support that the Bulgarian Government has provided to the holders of the Bonds as outlined in the Bond prospectus.

The b1 BCA of BEH could be lowered if BEH were to make significant payments under a recent arbitration award without receiving compensating amounts that had the effect of materially weakening its financial profile. The stable outlook reflects Moody's view that a one notch downgrade of the BCA may not result in a downgrade of the final rating.

Factors that Could Lead to an Upgrade

Currently, there is limited upward rating potential in light of the uncertainties over the settlement of the Belene arbitration award and the timing and nature of the full liberalisation of the wholesale electricity market and its impact on BEH.

Factors that Could Lead to a Downgrade

Downward rating pressure may develop if (1) BEH does not receive timely support from the Government if such were needed, including for potential payments to ASE; or (2) we were to reassess the estimate of high support from the Government of Bulgaria; or (3) the Government's rating were to be lowered.

We would expect BEH to maintain FFO/debt of at least in the high teens in percentage terms to maintain the existing b1 BCA. Downward pressure could be exerted on the BCA if (1) the positive regulatory changes implemented in 2015 were to be reversed as a result of market liberalisation or other reasons, and this were to cause further deficits incurred by BEH; and (2) changes in BEH's operating environment, including due to market liberalisation, led to a significant deterioration in its financial profile.

Key Indicators

Exhibit 2

[1] Bulgarian Energy Holding EAD

	12/31/2015	12/31/2014	12/31/2013	12/31/2012	12/31/2011
(CFO Pre-W/C + Interest) / Interest	6.7x	2.8x	7.8x	7.4x	8.6x
(CFO Pre-W/C) / Net Debt	29.71%	7.41%	23.16%	29.88%	49.07%
RCF / Net Debt	29.71%	6.58%	14.87%	22.53%	44.56%
(CFO Pre-W/C) / Debt	20.90%	6.39%	19.14%	22.57%	31.70%
RCF / Debt	20.90%	5.67%	12.28%	17.02%	28.78%
Debt/book capitalization	20.40%	23.78%	24.22%	20.81%	26.32%

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
Source: Moody's Financial Metrics™

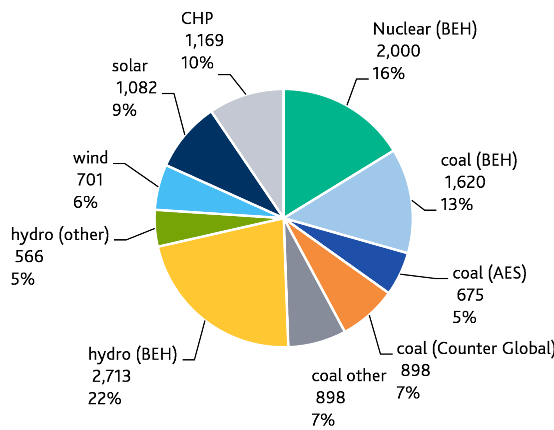
Detailed Rating Considerations

Competitive generation base in export driven market should support generation earnings over the medium term

BEH owns c. 6,300 megawatts (MW) of power generation assets representing 51% of the installed capacity in Bulgaria and in 2015 generated net 27 terawatt hours (TWh) of electricity (around 60% of the total generation in Bulgaria).

Exhibit 3

Diversified and low cost generation base supports BEH's earnings (installed capacity, MW)



Source:ENTSO-E; BEH

Bulgaria is a net electricity exporter with net exports in the range of 8-10 TWh per year (around 10 TWh in 2015) depending on demand. Interconnector capacity with main export destinations (Greece, Turkey and Macedonia) is 1,530 MW and is fully utilised. Demand from export markets is expected to remain high in the near term, as Greece and Turkey have a large proportion of gas-fired generation which has been less competitive in the last few years. Both Greece and Turkey import substantially all of their gas needs, predominantly under long-term bilateral contracts. Although there has been a significant decrease in oil and liquid hub gas prices, pricing under such contracts have not followed this trend as quickly. As a result of higher gas prices and lower CO2 costs, the Bulgarian generation mix is expected to remain competitively priced and support exports and hence BEH's earnings in the near term.

The nuclear plant generates around BGN300 million EBITDA per annum, although the contribution in 2016-2017 could be less due to the ongoing plant upgrade.

The contribution from BEH's thermal plant has decreased in recent years due to a reduction in the free CO2 allowances and increase in the input coal cost, however, it remains competitive with current prices in the export markets (c. 40 EUR/MWh for the Greek pool market). 937 MW of the hydro capacity is flexible pumped-storage and as such operates to achieve higher prices on the balancing market and at peak times.

Improving financial profile supported by deficit reduction measures introduced in 2015

The wholesale market in Bulgaria currently operates under a dual system (regulated and competitive segments). NEK (a wholly owned subsidiary of BEH) has a public mandate to act as a single buyer and seller for all regulated purchases and sales on the market. Electricity outside the regulated quotas trades at negotiated prices in an open market.

Under this single buyer model, NEK purchases electricity from producers with regulated generation quotas at regulated prices. Quota producers include some conventional generators, renewables, and highly efficient co-generation plants. NEK also holds obligations to purchase power under two power purchase agreements (PPA) with privately owned thermal plants (owned by AES-3C and ContourGlobal). NEK's regulated sales are to end suppliers for their consumers on regulated supply tariffs (mainly low voltage consumers, e.g. households and small businesses) and volumes to cover transmission and distribution technological losses.

In the period 2011-2014, NEK's regulated sales prices did not reflect the full costs of its regulated purchases and its financial profile deteriorated as in effect it absorbed the energy system deficit (estimated at BGN1.6 billion as of Dec'15). As a consequence, NEK was also not able to fullfil its trade obligations towards the PPA counterparties and accumulated BGN1.2 billion of overdue payables to them (as of Dec'15).

In 2015, the government implemented a series of measures to address the deficit and the early results of those had an immediate positive impact on BEH's financial performance. The key measures include 1) a limitation on the renewables and co-generation output eligible for additional subsidy payments; 2) an increase in the scope and amount of the charge levied on consumer bills to cover system costs such as renewables generation support (the "obligation to society fee"); and 3) the establishment of a fund (the Security of the Energy System Fund or "SESF") which is funded by a five percent tax on generation revenues and proceeds from auctioning of the CO_2 allowances allocated to Bulgaria.

In 2015, for the five months that the new arrangements have been in place, the measures contributed around BGN600 million in total and NEK's EBITDA improved by BGN375 million. Though, at the same time the tax on generation revenues impacted BEH's power generation earnings. Overall, the net additional cash inflows supported BEH's consolidated FFO/net debt recovery to 29.7% in 2015 from 6.6% in 2014. A 15% reduction in the fixed availability fee for the PPAs was also negotiated, but this only took effect in April 2016 and the saving is passed onto final consumers through lower tariffs for the new regulatory period.

The above mechanism will remain in place for the new regulatory period which started on 1 July 2016 and we expect that the measures would support NEK's return to positive EBITDA in 2016 with no tariff deficit accruing for this period despite some regulated tariff reductions due to lower estimated costs.

We note that the market liberalisation process may lead to structural changes in this mechanism or NEK's role within the sector as a whole (see below), however, we expect that BEH would continue to benefit from those proceeds in the near-term.

Unsettled regulatory environment with some political intervention has caused significant earnings volatility

Electricity and gas regulation in Bulgaria is undertaken by the Energy and Water Regulatory Commission (EWRC). Since 2015, EWRC members are appointed by the Parliament rather than the Council of Ministers and this in our view should increase its independence. However, a track record of independent decision-making is still to be established.

Past regulatory decisions have resulted in significant earnings volatility which is credit negative as it results in limited medium term cash flow visibility. Group EBITDA has fluctuated between over BGN1 billion and BGN330 million in the past 6 years. Regulated segments such as electricity transmission and gas supply, which are otherwise stable and predictable businesses, have seen their EBITDA fluctuate from negative BGN27 million to BGN180 million (ESO) or from negative BGN103 million to BGN53 million (gas supply).

Regulation is largely based on known principles such as rate of return on a regulated asset base for electricity and gas transmission and "cost plus" for the gas supply business. However, application of these principles still lacks the level of transparency seen in the more established regulatory regimes elsewhere in Europe.

There have been past instances when tariffs did not fully reflect incurred costs (such as gas supply until 2013 and NEK's regulated sales prices). Also, regulated prices for BEH's quota generation are below open market levels and this limits generation earnings, even though prices still reflect generation costs. There were also cases of one-off decisions, such as the introduction of the obligation to society fee on exports or transmission charges on renewable power plants, that have been quickly abolished, but nevertheless introduced unpredictability and volatility in BEH's earnings. Regulatory periods for electricity transmission are of one year duration only and this, together with such one-off changes, limits the longer term stability and visibility of regulated earnings.

As a positive, we take into account the stable contracted contribution from the gas transit business, where tariffs are largely linked to inflation, albeit being a bilateral arrangement, there is limited information on the terms and conditions, and hence risks and rewards embedded within the contract.

Full market liberalisation poses significant uncertainty on the trajectory of electricity generation earnings

Full market liberalisation within the electricity sector (apart from network assets) is a strategic objective for the government in order to achieve full compliance with the 3rd energy package of EU Directives. It is intended that the current single buyer model under regulated prices and generation quotas will be replaced with a fully competitive wholesale market.

The first step towards liberalisation was the launch of the Bulgarian power exchange (IBEX) in January 2016, however the final shape of the liberalised market and impact on BEH is still unclear. The World Bank is expected to deliver a set of proposals during summer 2016. The proposals will then be open to public discussion, as the transition to full liberalisation will also require legislative changes.

In the last couple of years, BEH's generation earnings have been largely from the open market, as its regulated quotas have been decreasing, although the group is still expected to generate around 4TWh under the regulated quotas at least until June 2017.

Open market transactions are at the moment negotiated bilaterally and thus are somewhat shielded from the price volatility that liberalisation with trading of all generation volumes on an exchange could bring. Currently BEH realises open market prices of around 70 BGN/MWh (approx. 35 EUR/MWh) which ensures all of its plants are operating profitably. This is also supported by relatively higher prices in the export markets.

However, day ahead baseload prices at the IBEX power exchange have averaged 22-26 EUR/MWh in the first quarter of 2016 which is largely in line with prices in Romania (the other net exporter in the region). Though IBEX is still a very young and illiquid market, we note that BEH's generation base is largely fixed cost and a potential decrease in wholesale power prices will have a direct negative impact on its EBITDA. For example, a 10 BGN/MWh reduction in wholesale prices sustained for a year will result in around a BGN150 million decrease in EBITDA of the nuclear plant alone (assuming average annual production of 15 TWh).

Consequently, wholesale market changes pose a key uncertainty with respect to the future business risk profile of the group. A material reduction in wholesale prices realised by BEH, sustained for a prolonged period, would be credit negative.

100% government ownership and ownership of strategic energy infrastructure provides three notches of rating uplift

BEH's Ba1 CFR benefits from three notches of rating uplift for extraordinary support from its 100% shareholder, the Government of Bulgaria (Baa2, stable). This is driven by our high support assessment and expectation that BEH's shareholder would provide the company with timely financial support if such were needed in order to avoid a default.

Our assessment incorporates past instances of support provided by the Government in the form of 1) government debt guarantees; 2) an equity injection in 2009 and 3) most recently forgoing dividends in 2015 and planning not to take such until BEH returns to financial stability. We also note the letter of support that the Bulgarian Government has provided to the holders of the Bonds as outlined in the Bond prospectus.

We also expect such support to be available in case BEH were to make any cash payments in order to settle the recent arbitration award by the International Court of Arbitration. In June 2016, the court judged that NEK should be required to pay EUR550 million plus accruing interest to Atomstroyexport (ASE) with respect to nuclear equipment manufactured by the latter for the cancelled Belene project in Bulgaria.

We further note that BEH owns a substantial part of the strategic energy infrastructure of the country, including gas and electricity transmission and the nuclear power plant. It is therefore strategically important from an economic and national security perspective.

Other considerations

In addition to the factors discussed above, the rating assessment also factors in the residual issues of interpretation of financial statements given that there are a number of re-occurring audit qualifications.

Our adjusted financial metrics include, among other adjustments, an allowance of approx. BGN1 billion for potential nuclear decommissioning liabilities of the group with respect to the Kozloduy power plant. The allowance is based on our estimates broadly taking into account 1) BEH's installed capacity; 2) the range of nuclear liabilities reported by peer nuclear plant operators in Europe; and 3) access to state funds dedicated to nuclear decommissioning works.

Liquidity Analysis

At the end of July 2016 BEH successfully issued EUR550 million bonds due in 2021 (4.875% coupon). The issuance improves significantly BEH's liquidity as it is sufficient to cover the group's short term debt maturities, mainly consisting of the EUR535 million bridge to bond facility due in April 2017. Given the successful refinancing of the bridge loan, we estimate that BEH's cash flow generation and cash equivalents (BGN833 million as of end 2015) would be sufficient to cover its cash needs for the next 12 months. We note that our assessment at the moment excludes any settlement for the Belene arbitration award, as we expect this to be supported by the Government if needed. If this were not the case, BEH would require additional external funding to meet the obligation.

BEH's ongoing debt maturities are minimal and, excluding the bridge to bond facility, the only large debt repayment is its EUR500 million Eurobond due in November 2018.

We further note that BEH's liquidity is fully reliant on internal cash flow generation, as the group has no short term liquidity facilities in place.

Structural Considerations

A corporate family rating is an opinion of the BEH group's ability to honour its financial obligations and is assigned to BEH as if it had a single class of debt and a single consolidated legal structure.

BEH's strategy is to consolidate debt at the holding company level and with the issuance of the EUR550 million bonds this is expected to account for over 70% of total group debt. Holding company debt service is predominantly reliant on dividends being upstreamed, ensured through BEH's operating subsidiaries being required to distribute half of their net profits after certain allocations to retained earnings and reserves. Nevertheless, unsecured holding company creditors would be subordinated to claims of existing senior secured lenders (BGN167 million as of December 2015), as well as structurally subordinated to unsecured lenders and trade creditors of the subsidiaries.

Profile

Bulgarian Energy Holding EAD is the incumbent 100% state owned electricity and gas utility in Bulgaria. It owns around 50% of the electricity generation facilities in the country, including the 2,000MW nuclear power plant, 2,713 MW of hydro plants, as well as a 1,620MW lignite plant, the input fuel for which is sourced at BEH-owned mining facilities Through its subsidiary NEK, it is the single trader on the regulated wholesale power market. It also owns and operates the high voltage electricity transmission grid (15,130 km) and the gas transmission and transit networks in Bulgaria (1,700km and 945km respectively), and is also the main regulated wholesale gas supplier. In 2015, BEH group generated BGN675 million of EBITDA.

Rating Methodology and Scorecard Factors

The principal methodologies used in rating BEH are Moody's ''Regulated Electric and Gas Utilities'', published in December 2013 and ''Government Related Issuers'', published in October 2014. Please see the Credit Policy page on www.moodys.com for a copy of these methodologies. BEH's assigned BCA is currently P)b1, three notches lower than the Ba1 grid-indicated outcome.

Exhibit 4

Rating Factors

Bulgarian Energy Holding EAD

Rating Factors				
Bulgarian Energy Holding EAD				
Regulated Electric and Gas Utilities Industry Grid [1][2]	**As of December 2015**		**Moody's 12-18 Month Forward View as of July 2016 [3]**	
Factor 1 : Regulatory Framework (25%)	**Measure**	**Score**	**Measure**	**Score**
a) Legislative and Judicial Underpinnings of the Regulatory Framework		B		B
b) Consistency and Predictability of Regulation		B		B
Factor 2 : Ability to Recover Costs and Earn Returns (25%)				
a) Timeliness of Recovery of Operating and Capital Costs		B		B
b) Sufficiency of Rates and Returns		B		B
Factor 3 : Diversification (10%)				
a) Market Position		B		B
b) Generation and Fuel Diversity		Baa		Baa
Factor 4 : Financial Strength (40%)				
a) CFO pre-WC + Interest / Interest (3 Year Avg)	5.7x	A	5x - 6x	A
b) CFO pre-WC / Debt (3 Year Avg)	15.5%	Baa	18%-23%	Baa
c) CFO pre-WC – Dividends / Debt (3 Year Avg)	12.9%	Baa	18%-23%	A
d) Debt / Capitalization (3 Year Avg)	22.7%	Aaa	26% - 28%	Aa
Rating:				
Grid-Indicated Rating Before Notching Adjustment		Ba1		Ba1
HoldCo Structural Subordination Notching		0		0
a) Indicated Rating from Grid		Ba1		Ba1
b) Actual BCA Assigned				b1
Government-Related Issuer				**Factor**
a) Baseline Credit Assessment				b1
b) Government Local Currency Rating				Baa2, Stable
c) Default Dependence				High
d) Support				High
e) Final Rating Outcome				Ba1

[1] All ratios are based on 'Adjusted' financial data and incorporate Moody's Global Standard Adjustments for Non-Financial Corporations.
[2] As of 12/31/2015; Source: Moody's Financial Metrics™
[3] This represents Moody's forward view; not the view of the issuer; and unless noted in the text, does not incorporate significant acquisitions and divestitures

Ratings

Exhibit 5

Category	Moody's Rating
BULGARIAN ENERGY HOLDING EAD	
Outlook	Stable
Corporate Family Rating	Ba1
Senior Unsecured	Ba2

Source: Moody's Investors Service

REPORT NUMBER 1034898