

# Bulgarian Energy Holding EAD

## Full Rating Report

### Ratings

**Foreign Currency**  
Long-Term IDR BB+

**Local Currency**  
Long-Term IDR BB+

### Outlooks

Long-Term Foreign-Currency IDR Stable  
Long-Term Local-Currency IDR Stable

### Financial Data

Bulgarian Energy Holding EAD	31 Dec 12	31 Dec 11
Revenue (BGNm)	6,446	6,011
Operating EBITDA (BGNm)	607	1,027
Operating EBITDA margin (%)	9.42	17.09
Funds from operations (FFO) (BGNm)	406	1,018
Cash flow from operations (BGNm)	444	1,173
Capital expenditure (BGNm)	(374)	(538)
Dividends paid (BGNm)	(141)	(83)
Free cash flow (BGNm)	(71)	552
FFO adjusted gross leverage (x)	3.6	1.8
FFO adjusted net leverage (x)	2.4	0.9
FFO fixed charge coverage (x)	8.4	14.1

### Key Rating Drivers

**Dominant Market Position:** Bulgarian Energy Holding EAD (BEH), together with its subsidiaries (BEH group), has a dominant position in Bulgaria's electricity and gas markets. The group's key segments, based on EBITDA contribution, are electricity generation, electricity transmission and gas transmission and transit.

**Strong Links With the State:** Fitch Ratings gives BEH a one-notch uplift for state support over its standalone rating of 'BB'/Stable, reflecting the group's strong links with the Bulgarian state (BBB-/Stable). The strong linkage is mainly evidenced by state guarantees for about 40% of the group's debt, strong operational ties with the state and strategic importance. We expect the share of state-guaranteed debt to gradually decrease in the long term.

**Regulatory Regime's Weakness:** The regulatory framework in Bulgaria is less developed than in most other EU countries and provides for lower and less predictable remuneration for electricity and gas network businesses and for electricity and gas supply. Another constraint relates to electricity price setting which is often influenced by political decisions as seen in February-March 2013. A substantial part of power generation is subject to price regulation.

**Higher Leverage:** Fitch projects funds from operations (FFO) adjusted net leverage to weaken to about 2.5x-3x in 2014-2015 from 2.4x in 2012 (1x in 2011) due to negative free cash flow on the back of higher capex. BEH's leverage of 2.5x-3x is in line with Fitch's 2014-2015 leverage expectation for central European (CE) utilities, which are rated higher than the company. However, we view BEH's debt capacity as lower than that of Fitch-rated CE peers.

**Corporate Governance:** The ratings are negatively affected by corporate governance limitations, including a qualified audit opinion for BEH group's 2009-2012 financial statements.

### Rating Sensitivities

**Leverage and Regulations:** FFO adjusted net leverage below 1.5x on a sustained basis, for instance due to a lowered capex plan and an improved financial performance would be positive for the ratings. Rising and more predictable remuneration for regulated activities and a rising share of market-based pricing in the power generation sector would be positive.

**Financial Underperformance, Litigation Payments:** FFO adjusted net leverage exceeding 3x on a sustained basis, for instance due to financial underperformance or substantial payments related to the ongoing litigation concerning the terminated Belene nuclear project, or failure to maintain sufficient liquidity would be negative for the ratings.

**Links With the State:** Weakening links between BEH and Bulgaria, for instance, in the form of a significant reduction of the share of state-guaranteed debt and/or lack of additional tangible support if needed could be credit negative. A negative change in Bulgaria's ratings could affect BEH's ratings if the company's ratings become capped by the sovereign.

### Liquidity and Debt Structure

**Sufficient Liquidity:** At end-December 2012, the group's liquidity was sufficient as it had cash of BGN619m versus short-term debt of BGN589m. BEH group had a large debt maturity in May 2013, a EUR195m (BGN382m) loan of BEH's subsidiary (NEK EAD). This loan has been refinanced with a EUR195m bridge bank loan at the holding level. Fitch notes the group's weak diversification of cash and equivalents by bank as most of the cash is held in a single bank.

### Related Research

[Fitch Rates Bulgarian Energy Holding 'BB+'; Stable Outlook \(March 2013\)](#)

[2013 Outlook: European Utilities \(December 2012\)](#)

[Rating EMEA Utilities \(August 2012\)](#)

[Fitch: Future CO2 Prices Remain Risk for Utilities After EU Vote \(April 2013\)](#)

[Fitch: Large European Utilities Have Limited Rating Headroom \(March 2013\)](#)

[CEE-5: Boosting Growth is Key for Ratings \(April 2013\)](#)

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This document focuses on the key credit issues relating to the issuer, and assumes background knowledge of both BEH and its industry.

**Key Contents**

**Summary**

Key Rating Issues	Page 2
Issues Register	Page 8
Financial Expectations	Page 9
Financial Expectations - Charts	Page 11
Sector Credit Factors	Page 12
Peer Analysis	Page 13
Group Structure	Page 14
Historical Financial Information	Page 15
Reconciliation of Key Metrics	Page 16

**Key Rating Issues**

**Dominant Position in the Bulgarian Electricity and Gas Markets**

BEH group has a vertically integrated position in the electricity market with operations ranging from lignite mining, power generation to power transmission and supply. Its market share in the country's power generation is 63% (Kozloduy NPP EAD's nuclear power plant – 35%, Maritsa Iztok 2 TPP EAD's lignite-fired power plant – 22% and National Electric Company EAD (NEK)'s hydro power plants – 6%). In 2011 the group generated 27.6 terawatt hours (TWh) of electricity and had an installed capacity of 6.2 gigawatts (GW). The group owns and operates the country's electricity transmission grid and is the public provider of electricity, as its subsidiary NEK purchases power from power plants in Bulgaria (both from the BEH group and outside the group) in the regulated and free markets and sells it to end-customers and power distributors.

- Dominant position in the Bulgarian electricity and gas markets is positive for the ratings.

Figure 1

**BEH Group's Share in Bulgarian Power Generation Market (2011 Data)**

Producer	Total generation (TWh)	Free market (TWh)	Regulated market (TWh)	Share in Bulgaria's generation (%)
Kozloduy NPP (nuclear power plant)	15.3	6.5	8.8	35
Maritsa Iztok 2 TPP (lignite-fired power plant)	9.5	7.4	2.2	22
NEK (hydro power plants)	2.8	0.9	1.9	6
<b>Total BEH group</b>	<b>27.6</b>	<b>14.7</b>	<b>12.9</b>	<b>63</b>
Power generation in Bulgaria (energy fed into transmission grid)	44.1	17.7	26.4	100
Share of free and regulated market in Bulgaria (%)	100	40	60	

Source: Company, Fitch

In the gas market, BEH group through its subsidiary Bulgartransgaz EAD is the owner and operator of the country's transmission gas network and generates revenues from the transit of Russian gas from Romania to Greece, Macedonia and Turkey. It is also the public supplier of gas in the country through Bulgargaz EAD. Most of the gas supplied to end-customers (75%) comes from imports from Russia within a long-term take-or-pay contract with OAO Gazprom (BBB/Stable).

**European Commission's Antitrust Proceedings**

In December 2012 the European Commission (EC) opened formal proceedings to investigate whether BEH may be abusing its dominant market position in the wholesale electricity market in Bulgaria. The EC has concerns that BEH might be hindering competition in the wholesale electricity market in Bulgaria and neighbouring member states through territorial restrictions. The proceedings do not have an immediate rating impact. However, Fitch will continue to monitor the situation and may review the ratings in case of substantial changes in BEH's market position or profitability stemming from the EC investigation.

Figure 2

**BEH Group's Power Generation Assets**

Subsidiary	Capacity (GW)
Kozloduy NPP (nuclear power plant)	1.9
Maritsa Iztok 2 TPP (lignite-fired power plant)	1.6
NEK (hydro power plants)	2.7
<b>Total</b>	<b>6.2</b>

Source: Company, Fitch

**Related Criteria**

Corporate Rating Methodology (August 2012)

- BEH group owns two large power plants, nuclear and lignite-fired, which are used as baseload capacity.
- The group owns the electricity and gas transmission networks and gas transit network.

## Solid Asset Base

### *Nuclear Power Plant*

BEH's most important generation source is the Kozloduy nuclear power plant (Kozloduy NPP), which represented 35% of Bulgarian power production in 2011. Kozloduy NPP operates two Russian-technology pressurised water reactors (units 5 and 6, VVER-1000) with a total output of 1,920 megawatts (MW), commissioned in 1987 and 1991. The original decommissioning dates for Kozloduy's two units are 2017 and 2019, respectively, but the company has initiated an assessment process for an extension of their useful life. The results of the assessments will be submitted to the Agency for Nuclear Regulation (ANR) in 2013 and 2014 for units 5 and 6, respectively. BEH expects that the ANR will approve a 20-year useful life extension for both units (10 years plus 10 years).

The Bulgarian population is in favour of nuclear power. This was confirmed by the January 2013 national referendum related to nuclear power plants. This reduces the risk of non-extension of the useful life of Kozloduy's units. Non-extension could be negative for the ratings given the relatively close time to the plants' decommissioning according to the original dates.

The weighted average remaining useful life of BEH's nuclear portfolio was about six years at end-2012 (or 28 years assuming successful extensions of the useful life) compared with Slovenske Elektrarne, a.s.'s (BBB/Stable) 19 years at end-2012; CEZ, a.s.'s (A-/Stable) 23 years, Electricité de France (EDF)'s (A+/Stable) 12 years, E.ON SE's (A/Stable) three years and RWE AG's (A-/Stable) two years.

### *Lignite-Fired Power Plant*

Maritsa Iztok 2 TPP's 1.6GW lignite-fired plant is the biggest renewed thermal power plant in Bulgaria (22% of 2011 power generation). The plant receives lignite supplies from the adjacent Mini Maritsa Iztok mine, which is also owned by BEH. The lignite deposits are sufficient to cover almost 60 years of production (at 35 million tons of lignite per year).

The power plant's three old units were commissioned in the 1960s and five newer units commissioned in 1985-89. The plant has been modernised over the past few years which included rehabilitation of the units and the installation of flue gas desulphurisation for each unit. Thanks to this modernisation the useful life of the units was substantially extended (units 1-4 to 2033, units 5-6 to 2038). The useful life of units 7-8 will be extended to 2040, when the rehabilitation programme is completed in 2014.

### *Hydro Power Plants*

NEK owns 30 hydro power plants with total installed capacity of 2.7GW in turbine mode and 0.9GW in pumping mode. In 2011 the total electricity generated by NEK's hydro power plants amounted to 2.8TWh (6% of the country's generation).

### *Electricity and Gas Transmission Networks*

The BEH group owns and operates the national electricity transmission network, which is the process of unbundling and ownership transfer from NEK to another BEH subsidiary, Electricity System Operator EAD (ESO). BEH group's gas transmission network is owned by Bulgartransgaz. The expected average remaining useful life of both networks is about 20 years. The group also owns gas transit pipelines that enable it to transit Russian gas from Romania to Greece, Macedonia and Turkey under ship-or-pay contracts mainly with Gazprom.

## Strong Links With the State

Fitch gives BEH a one-notch uplift for state support over its standalone rating of 'BB'/Stable, reflecting the group's strong links with the Bulgarian state (BBB-/Stable). The strong linkage is mainly evidenced by state guarantees for about 40% of the group's debt, strong operational ties with the state and the strategic importance that stems from BEH group's dominant market position in the two strategic markets. BEH is 100% owned by the government and there are no plans for the company's privatisation.

- Fitch gives BEH a one-notch uplift for state support over its standalone rating of 'BB'/Stable, reflecting the group's strong linkage with the Bulgarian state.

### *Tangible Support*

The BEH group was established in 2008 when the government contributed in kind 100% shares of several state-owned companies (NEK, Kozloduy NPP, Maritsa Iztok 2 TPP and Mini Maritsa Iztok) to BEH in order to create a national champion in the electricity and gas markets. This contribution increased the group's property, plant and equipment to BGN7.5bn at end-2008 from BGN0.6bn at end-2007 and the group's capital by BGN0.8bn. Another form of tangible support was from cash injections of BGN500m in 2008 and BGN200m in 2009 in order to support the activities of the two weaker subsidiaries, NEK and Bulgargaz. A more recent form of support is the government's plan not to demand a dividend payment from BEH in 2013 due to the weaker profitability of some of BEH's main subsidiaries in 2012.

State guarantees were provided for some loans utilised by subsidiaries (mainly Kozloduy NPP, Maritsa Iztok 2 TPP and NEK). At end-2012 loans for BGN682m or 41% of the group's debt were guaranteed by the state. We expect the share of government-guaranteed debt to decrease in the long term as the guaranteed loans are repaid and new debt is unlikely to benefit from guarantees.

### *Operational and Strategic Ties*

BEH has strong operational ties with the state as the government is directly involved in the management of the group, including preparation of capex plans and cost control. Strategic ties are strong given that the BEH group is the country's biggest state-owned company and the Bulgarian counterparty in several strategic projects supported by the government, such as Nabucco, South Stream and the gas interconnector between Bulgaria and Greece, which aim to improve the security of gas supplies to Bulgaria.

### *Fitch's View on State Support*

Fitch usually does not provide rating uplift for state support for European state-owned or state-controlled utilities, that operate wholly commercially or in a liberalised market with an adequate tariff mechanism.

However, unlike many other state-owned or state-controlled utilities operating in the EU, BEH does not operate in a fully competitive environment. In addition, the remuneration for regulated activities is insufficient (see section *Weakness of the Regulatory Framework*). Given these regulatory circumstances BEH's profitability and cash flow is weaker than other EU utilities' operating in more liberalised and transparent environments.

Fitch expects that the one-notch uplift for state support could be eliminated in the next three to five years if the share of debt guaranteed by the state decreases substantially and the electricity market is liberalised. The latter should include an enhancement of the tariff mechanism, which would improve the remuneration and cash flows and thus BEH's standalone profile.

### **BEH is Rated on a Consolidated Basis**

Fitch rates BEH based on the consolidated business and financial profile. Although BEH is a holding company, it has 100% ownership of all the main subsidiaries. The group was created by the government in 2008 within the restructuring and consolidation process of the energy sector through an in-kind contribution of the shares of several state-owned power companies to the predecessor of BEH. The government views the whole BEH group as the state's strategic asset in the electricity and gas markets. We expect future external debt to be raised at the BEH level, thus mitigating any structural subordination within the group.

The current degree of integration between the holding company and the main subsidiaries is assessed by the agency as moderate and is expected to strengthen in the next few years as the group moves from a financial to an operational holding structure. All subsidiaries preserve their operational independence and licenses, but are directly subordinated to the corporate centre of BEH. The main source of recurring cash flow for the holding company is dividends from subsidiaries (see Figure 3).

- Fitch rates BEH based on the consolidated business and financial profile.
- We expect future debt to be raised at the BEH level, thus mitigating any structural subordination within the group.

Figure 3  
BEH Holding Company  
Revenue and EBITDA

(BGNm)	2011	2012
Revenue from holding agreements	20	20
Revenue from subsidiary dividends	214	539
- From Bulgartransgaz	81	194
- From Koloduy NPP	44	184
- From NEK	74	89
- From Martisa Iztok 2 TPP	9	43
<b>Total revenue</b>	<b>234</b>	<b>559</b>
<b>EBITDA</b>	<b>171</b>	<b>244</b>

Source: Company, Fitch

- The regulatory framework in Bulgaria is less developed than in most other EU countries and provides for lower and less predictable remuneration.
- Another constraint relates to electricity price setting which is often influenced by political decisions.

- BEH group intends to substantially increase its capex in 2013-2017. The growth primarily stems from much higher investments planned by the holding company.

BEH supports some of its financially weaker operating subsidiaries with inter-company loans. It has recently refinanced NEK's EUR195m syndicated bank loan with a bridge loan at the holding level.

### Weakness of the Regulatory Framework

The regulatory framework in Bulgaria is less developed than in most other EU countries and provides for lower and less predictable remuneration for electricity and gas network businesses and for electricity and gas supply. Another constraint relates to electricity price setting which is often influenced by political decisions. An example of this occurred in March 2013, when the regulator decreased end-user electricity prices by 6%-7% following nationwide protests against high electricity prices which had forced the government to resign in February.

The regulated electricity and gas business accounts for about 30% of EBITDA (further 20% of EBITDA is contributed by gas transit which is exposed to volume risk as is not fully comparable to domestic regulated network activities). In addition, a further 45% of EBITDA comes from power generation, of which a substantial part is subject to regulated wholesale power prices.

The remuneration on network assets and power generation assets is not sufficient due to the low level of the weighted average cost of capital (WACC) applied in the tariff formula. For the current regulatory period (July 2012-June 2013) the WACC is set at 2.28% for transmission assets and 3.55% for generation assets. This cash flow disadvantage is likely to diminish in the next few years given that, as agreed with the regulator, the WACC should gradually increase to 7%-8% by 2016. The assumption of a gradually rising WACC by 2016 (although at a slower pace than agreed with the regulator) is reflected in Fitch's projections for the BEH group.

We do not view as a supporting factor for the group's credit profile the sale of a substantial part of the power production of BEH's two main power plants, Kozloduy NPP and Martisa Iztok 2 TPP, at regulated wholesale prices, set below the market level. While it provides some cash flow visibility, it also does not support investment due to insufficient remuneration. We believe that electricity market liberalisation would be beneficial for these two plants as they would be able to sell power at higher market prices.

In addition, higher-than-expected costs in the one-year regulatory period are not fully reflected in tariffs and can lead to much lower cash flows for BEH. This happened in 2011-2012 due to a boom in renewables energy, which resulted in additional costs for BEH not covered by the tariffs.

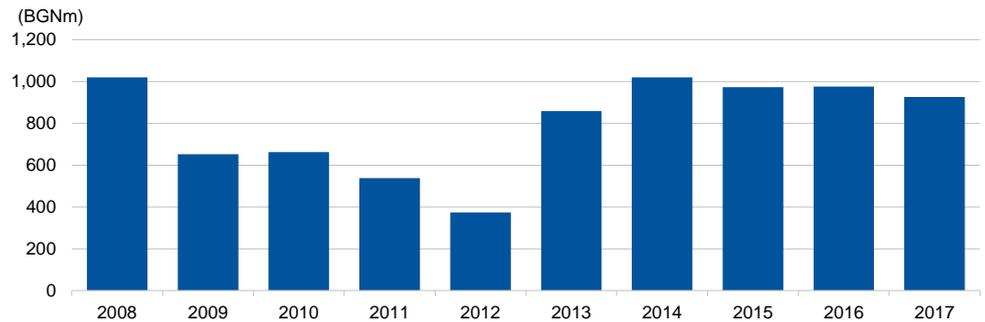
Until recently, the gas supply business was unprofitable as the gas prices for customers set by the regulator were lower than the price that the company was paying to Gazprom for imported gas. The situation has improved since late 2012, when BEH group has renegotiated its contract with Gazprom and achieved a 20% reduction of the imported gas price. BEH expects its gas supply business to be profitable in 2013.

### Large Capex Plan but With Some Flexibility

BEH group intends to substantially increase its capex in 2013-2017. The capex plan for this period totals BGN4.7bn (EUR2.4bn). The annual spending for 2013-2017 averages BGN951m, which is 32% more than the average of BGN718m for 2008-2011. The growth in planned capex primarily stems from much higher investments planned by the holding company. These investments relate to two large projects, the Nabucco gas pipeline (BGN1bn) and the gas interconnector between Bulgaria and Greece (BGN200m). The 2013-2017 capex of BEH subsidiaries is largely in line with their capex for 2008-2011 and is allocated mainly to maintenance and modernisation projects.

The group's capex for 2012 was unusually low, at BGN374m (see Figure 4), but this was mainly driven by capex cuts, and by capex postponements by subsidiaries due to the weaker financial performance of the group in 2012. This indicates that the group has some flexibility to reduce capex if needed.

Figure 4

**BEH Group Capex in 2008-2017**

Source: Company

BEH group's largest capex project is Nabucco (BGN1bn, equivalent to BEH's 17.38% share in the project's total capex). The Nabucco project was subject to several delays in the past few years and is still at an early stage. It may be further delayed or even cancelled, depending on the progress in discussions with other shareholders of Nabucco and the shareholders of the Shah Deniz gas production project in Azerbaijan as a potential gas supplier. If the owners of the Shah Deniz project choose Nabucco as their gas transportation route to Europe (their decision is expected by end-June 2013) then they plan to acquire a 50% stake in the Nabucco project. This would reduce BEH's capex for Nabucco by 50% to BGN500m.

**Corporate Governance Limitations**

The ratings are negatively affected by corporate governance limitations, including a qualified audit opinion for the consolidated 2009-2012 financial statements. The qualifications of the group's auditor, Grant Thornton for the 2012 consolidated statements, and of Ernst & Young for the 2009-2011 consolidated statements included several items, such as the lack of provisions for nuclear decommissioning costs, and the lack of recognition of separate assets for the group's rights to receive reimbursements for a portion of these costs from national and international funds.

Another qualification referred to the inability to obtain sufficient audit evidence as to recoverability of the assets related to the halted construction of the Belene nuclear power plant and the counting of some of the inventory. The agency views this and corporate governance in general as a concern for the rating.

***Lack of Nuclear Provisions and Related Assets***

Fitch views the lack of nuclear provisions and related assets on the balance sheet as a sign of weak accounting quality. The agency has analysed available information related to nuclear provisions of the two units under operations (5-6) and its potential impact on the company's nuclear adjusted leverage. The lack of nuclear provisions is mitigated by the annual payments made to the State Enterprise Radio Active Wastes company DP RAO (outside the BEH group) to cover future decommissioning costs. In 2012 BEH group paid BGN85m or 7.5% of its revenue coming from nuclear power production to DP RAO.

Fitch understands that Kozloduy NPP will not incur any substantial costs related to the decommissioning of the four older nuclear units (1-4) closed in 2004-2006 ahead of Bulgaria's accession to the EU. The ownership of units 1-2 was transferred from the BEH group to DP RAO in 2008, while units 3-4 were effectively transferred at the end of 2012. DP RAO is responsible for the decommissioning of all closed units. Related funding will come mostly from the International Fund Kozloduy, which is administered and managed by the European Bank for Reconstruction and Development (EBRD). The EU has provided EUR850m to this fund so far.

- Corporate governance limitations include a qualified audit opinion for the 2009-2012 consolidated financial statements.
- Fitch views the lack of nuclear provisions and related assets in the balance sheet as a sign of weak accounting quality.

- The government decided to stop the construction of the country's second nuclear power plant in Belene. The costs of the Belene project, amounted to BGN1.2bn end-2011.
- There may be also some additional liabilities related to the Belene project due to ongoing litigation.

### Terminated Belene Nuclear Power Plant Project

In March 2012 the government decided to stop the construction of the country's second nuclear power plant in Belene (2GW) due to the insufficient financial capacity to fund such a large project (about EUR11bn) and partly due to the exit of RWE from the joint venture. The costs of the Belene project, included in BEH's consolidated balance sheet as property, plant and equipment amounted to BGN1.4bn (EUR713m) at end-2012.

There may be also some additional liabilities related to the Belene project as the contractor for the project, Russian Atomstroyexport JSC, filed two claims with an arbitration court concerning non-performance of certain clauses under the 2006 agreement signed between Atomstroyexport and NEK related to the plant construction. According to BEH, the arbitration process is not likely to be resolved before the second half of 2014. We believe the litigation process with Atomstroyexport could be negative for BEH's ratings in the case of substantial payments related to the terminated Belene nuclear project that would cause FFO adjusted net leverage to exceed 3x on a sustained basis.

The most likely scenarios regarding the future of the Belene project, depending on government decisions, are: (1) the construction of an additional unit in Kozloduy by installing the 1GW reactor that Russia's Atomstroyexport JSC is producing for the Belene project, or (2) the restart of the Belene project with new foreign investors. Under the first scenario, for which an initial project assessment will be prepared by 2014, the government will decide whether to start the project and how to structure the financing. Most probably a strategic partner will participate in the project company for this investment. Under the second scenario, BEH expects that new foreign investors will partly compensate the group for the costs incurred so far. Fitch will analyse the credit impact of any decision related to the Belene project once more details are available.

Rating Issues Register

Issue	Fitch view	Likelihood, timescale, rating impact
<b>Dominant position in the Bulgarian electricity and gas markets:</b> BEH group has a 63% share in the country's power generation. It also owns and operates the electricity and gas transmission networks, the gas transit network and is the public supplier of electricity and gas.	Fitch does expect not any major changes in BEH's market position in the next five years.	Likelihood: To continue Timescale: Ongoing Rating impact: Positive
<b>Solid asset base:</b> BEH group owns the country's strategic assets - electricity and gas transmission networks, two large power plants used as the main baseload capacity.	Solid asset base enables the company to maintain its leading market position.	Likelihood: To continue Timescale: Ongoing Rating impact: Positive
<b>Strong Links with the State:</b> The strong links with the state are mainly evidenced by state guarantees for about 40% of the group's debt, strong operational ties and strategic importance due to BEH group's dominant market position.	Fitch gives BEH a one-notch uplift for state support over its standalone rating of 'BB'/Stable, reflecting the group's strong links with the state.	Likelihood: To continue Timescale: Ongoing Rating impact: Positive
<b>BEH is Rated on a Consolidated Basis:</b> The group was created by the government in 2008 within the restructuring and consolidation process of the energy sector. Although BEH is a holding company, it has 100% ownership of all the main subsidiaries. The government views the whole BEH group as the state's strategic asset in the electricity and gas markets.	Fitch rates BEH based on the consolidated business and financial profile. We expect future debt to be raised at the BEH level, thus mitigating any structural subordination within the group.	Likelihood: To continue Timescale: Ongoing Rating impact: Neutral
<b>Weakness of the Regulatory Framework:</b> The regulatory framework in Bulgaria is less developed than in most other EU countries and provides for lower and less predictable remuneration for regulated activities. Another constraint relates to electricity price setting which is often influenced by political decisions.	The remuneration on network assets and power generation assets is not sufficient due to a low WACC in tariffs. The assumption of gradually rising WACC by 2016 (although at a slower pace than agreed with the regulator) is reflected in Fitch's projections for the BEH group.	Likelihood: Very likely Timescale: Next three to five years Rating impact: Negative
<b>Large Capex Plan but With Some Flexibility:</b> BEH group intends to substantially increase its capex in 2013-2017. The capex plan for this period totals BGN4.7bn (EUR2.4bn). The annual spending for 2013-2017 averages BGN951m, which is 32% more than the average of BGN718m for 2008-2011.	The group's capex for 2012 was unusually low but this was mainly driven by capex cuts and postponements by subsidiaries due to weaker financial performance of the group in 2012. This indicates that the group has some flexibility to reduce capex if needed.	Likelihood: Very likely Timescale: Next five years Rating impact: Most likely neutral, but could be negative if capex is not reduced in a situation of weaker cash flows
<b>Corporate Governance Limitations:</b> The ratings are negatively affected by corporate governance limitations, including a qualified audit opinion for the consolidated and separate 2009-2011 financial statements.	The agency views a qualified audit opinion and generally developing corporate governance as a concern for the rating. We view the lack of nuclear provisions and related assets on the balance sheet as a sign of weak accounting quality.	Likelihood: Likely Timescale: Ongoing Rating impact: Negative
<b>Terminated Belene Nuclear Power Plant Project:</b> In 2012 the government decided to stop the construction of the country's second nuclear power plant in Belene (2GW). The costs of the Belene project, included in BEH's consolidated balance sheet as property, plant and equipment, amounted to BGN1.4bn (EUR713m) at end-2012. There may be also some additional liabilities related to the Belene project as the contractor for the project, Russian Atomstroyexport, filed two claims against BEH's subsidiary NEK.	We believe the litigation process with Atomstroyexport could be negative for BEH's ratings in case of substantial payments related to the terminated Belene nuclear project. There are several possible scenarios regarding the future of the Belene project depending on government decisions. Fitch will analyse the credit impact of any decision related to the Belene project once more details are available.	Likelihood: Uncertain Timescale: Uncertain Rating impact: Most likely neutral, but could be negative depending on the litigation process.

Source: Fitch

## Sector Performance and Expectations

(BGNm)	2011	2012	Expectation
<b>Electric power</b>			
Revenue	4,980	4,858	Fitch expects profitability to partially recover in 2014-2015 partly thanks to the gradually rising WACC in the tariffs for network assets and power generation assets.
Operating profit from continuing operations <sup>a</sup>	406	49	
<b>Natural gas</b>			
Revenue	2,017	2,305	Profitability of gas transmission should gradually increase in 2013-2016 thanks to the rising WACC in the tariffs. Fitch expects profitability of the gas supply business to improve in 2013 following a 20% reduction in the imported gas price thanks to the renegotiation of the Gazprom contract.
Operating profit from continuing operations <sup>a</sup>	59	2	
<b>Coal</b>			
Revenue	552	506	Weaker profitability versus 2011 to persist in 2013 due to lower lignite production volumes on the back of lower demand.
Operating profit from continuing operations <sup>a</sup>	24	8	
<b>Administration</b>			
Revenue	238	566	Revenue of this segment relates mostly to the holding company's dividends from subsidiaries, which are eliminated in the consolidation.
Operating profit from continuing operations <sup>a</sup>	167	241	
<b>Total (including inter-segment eliminations)</b>			
Revenue	6,098	6,509	Fitch projects BEH group's profitability to partially recover in 2014-15, but to remain below the 2011 level.
Operating profit from continuing operations <sup>a</sup>	443	56	

<sup>a</sup> Operating profit unadjusted by Fitch  
Source: Company/Fitch

The most important segment based on EBITDA is power generation (44% of 2011 EBITDA), followed by electricity transmission (27%) and gas transmission and transit (18%). Lignite mining contributed 13% of EBITDA. For information on the EBITDA split by company see Figure 5, *Group Structure Diagram*.

Fitch's internally generated expectations for key leverage and coverage metrics are shown on the next page.

### Cash Flows

BEH group's FFO fell in 2012 by 60% compared with 2011 due to weaker profitability of the power supply and transmission businesses, nuclear power generation, lignite mining and gas supply. The agency expects FFO to partially recover in 2014-15, but to remain below the 2011 level. The agency expects BEH to report negative free cash flow in 2013-2016 as the group increases its capex.

### Credit Metrics

Fitch projects FFO adjusted net leverage to weaken to about 2.5x in 2014 and 3x in 2015 from 2.4x in 2012 and 1x in 2011. This is due to negative free cash flow on the back of weaker FFO from 2012 and higher capex. BEH's leverage of 2.5x-3x is in line with Fitch's 2014-2015 leverage expectation for central European utilities, which are rated higher than the Bulgarian company. However, we view BEH's debt capacity as lower than that of Fitch-rated central European peers.

### Debt Structure

So far, the company has been reliant on bank loans as its main source of external debt and liquidity. BEH plans to diversify its funding structure in 2013 by issuing corporate bonds. Apart from higher debt repayments in 2013 (due to the maturity of NEK's EUR195m (BGN382m) bank loan), the debt maturity profile is well spread. NEK's loan has been recently refinanced

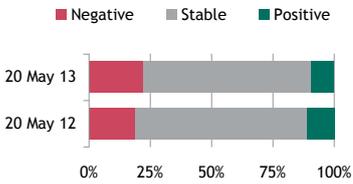
with a EUR195m bridge bank loan, which is planned to be replaced with a longer term bond or a bank loan later this year. The remaining two large loans, from European Atomic Energy Community (EURATOM, BGN322m outstanding at end-2012) and from Japan Bank for International Cooperation (BGN259m outstanding at end-2012), both guaranteed by the state, have gradual repayments until 2021 and 2018, respectively. Currency risk related to euro-denominated loans is mitigated by the fact that the Bulgarian lev, in which the BEH group generates most cash flows, has been fixed to the euro since 1999.

#### Weak Diversification of Cash

Fitch notes the group's weak diversification of cash and cash equivalents by bank. At end-September 2012, about 87% of the group's cash and cash equivalents were held in a single bank, Corporate Commercial Bank AD. We understand that the selection of financing institutions for cash holdings is done in accordance with instructions from the Ministry of Finance. The Bulgarian government has recently announced a plan to impose a limit for state-owned companies for the share of cash holdings in a single bank, expected at about 25% of total cash.

## Distribution of Sector Outlooks

Directional Outlooks and Rating Watches



Fitch's expectations are based on the agency's internally produced, conservative rating case forecasts. They do not represent the forecasts of rated issuers individually or in aggregate. Key Fitch forecast assumptions include:

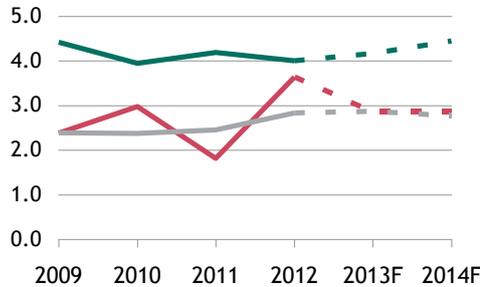
- FFO will partially recover in 2014-15, partly thanks to gradually rising WACC in the tariffs for network assets and power generation assets, but it will remain below the 2011 level;
- negative free cash flow in 2013-2016 as FFO is weaker from 2012 and the group increases its capex;
- no dividend in 2013 due to the expected government's decision not to demand a dividend for 2012, dividends reinstated in 2014.

## Definitions

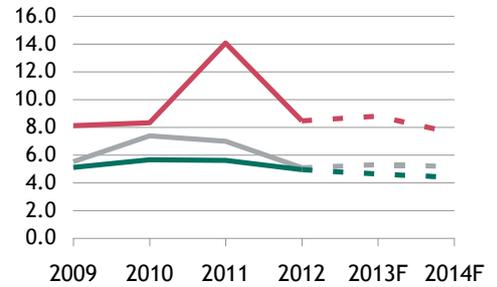
- Leverage: Gross debt plus lease adjustment minus equity credit for hybrid instruments plus preferred stock divided by FFO plus gross interest paid plus preferred dividends plus rental expense.
- Interest cover: FFO plus gross interest paid plus preferred dividends divided by gross interest paid plus preferred dividends.
- FCF/revenue: FCF after dividends divided by revenue.
- FFO profitability: FFO divided by revenue.
- For further discussion of the interpretation of the tables and graphs in this report see Fitch's "Interpreting the New EMEA and Asia-Pacific Corporates Credit Update Format" Special Report, dated 25 November 2009 and available at [www.fitchratings.com](http://www.fitchratings.com).

Bulgarian Energy Holding EAD — Utilities Median — Emerging BB Cat Median  
Source: Company data; Fitch.

## Leverage including Fitch expectations



## Interest Cover including Fitch expectations



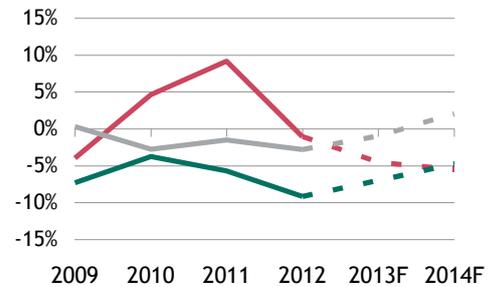
## Debt Maturities and Liquidity at end-December 2012

Debt maturities <sup>a</sup>	(BGNm)
Short-term	589
Long-term	1,087
<b>Unrestricted cash and equivalents</b>	<b>619</b>
<b>Undrawn committed mid-term liquidity facilities</b>	<b>0</b>

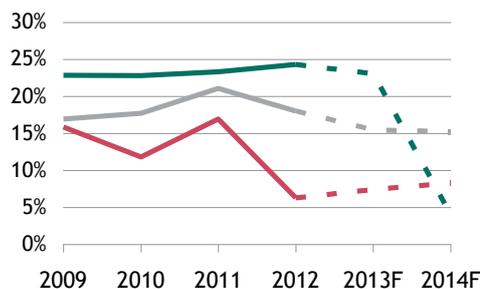
<sup>a</sup> including deferred financing

Source: Fitch

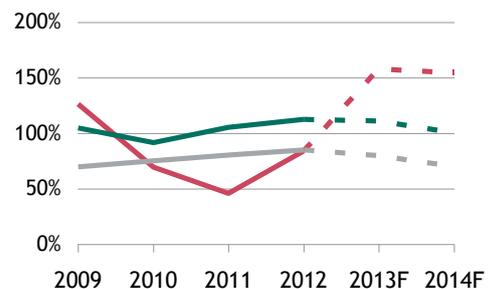
## FCF/Revenues including Fitch expectations



## FFO Profitability including Fitch expectations

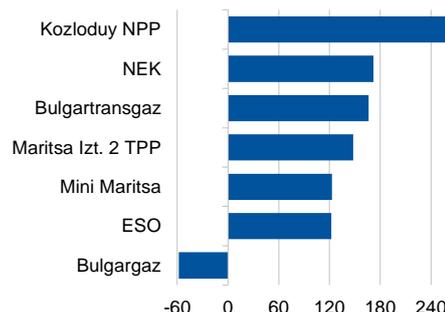


## Capex/CFO including Fitch expectations



## EBITDA by Company

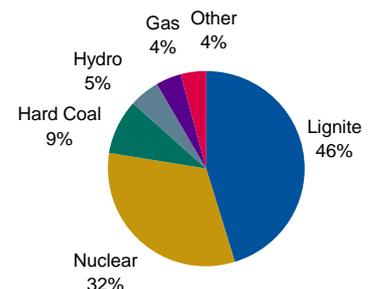
2011 data in BGNm; unadjusted by Fitch



Source: Company

## Bulgarian Fuel Mix - Volume

2011



Source: Company

## Sector Credit Factors Mapping

### Building Blocks - EMEA Energy Utilities - Bulgarian Energy Holding EAD ('BB+' / Stable)

	Sector Risk Profile	Company-Specific Traits			Financial Profile (historical where relevant and forecast, mid-points)				
		Asset base and concentration	Market risk and position	Cashflow profile	FFO adj. net leverage (x)	FFO fixed charge cover (x)	FFO interest cover (x)	Capex / CFO (%)	FCF
AA	Vertically integrated	<ul style="list-style-type: none"> <li>As for 'A' with diverse assets within all material business units</li> </ul>	<ul style="list-style-type: none"> <li>Low market risk, structurally unassailable market position</li> </ul>	<ul style="list-style-type: none"> <li>The majority of operating income comes from regulated assets; and ~ 100% natural hedge in other units</li> </ul>	2.0	6	7.5	70	As for 'A'
A	Partially integrated	<ul style="list-style-type: none"> <li>High level of asset quality and diversity by fuel with low overall emissions of CO<sub>2</sub>/high ability to pass through costs</li> <li>Up-, mid- and downstream businesses, diverse assets within most business units, multi-jurisdictions</li> </ul>	<ul style="list-style-type: none"> <li>Low market risk and strong market position due to a combination of structural factors and effective hedging</li> <li>Low regulatory risk</li> </ul>	<ul style="list-style-type: none"> <li>30-50% of operating income from regulated assets; or</li> <li>Strong portfolio/smoothing effects from vertical integration (i.e. extensive natural hedge)</li> </ul>	3.0	5	6.0	70	Structurally neutral to positive across the cycle
BBB	Minimal integration	<ul style="list-style-type: none"> <li>Good quality, diversified assets</li> <li>Some integration or merchant generator with wide range of technologies in different jurisdictions and medium level of overall emissions of CO<sub>2</sub></li> <li>Diverse transportation networks ownership</li> </ul>	<ul style="list-style-type: none"> <li>Moderate exposure to market risk and average market position in competitive markets</li> <li>Elevated or untested regulatory risk</li> </ul>	<ul style="list-style-type: none"> <li>Operating income is &lt;30% from regulated assets, but &gt;30% when including quasi-regulated assets; or</li> <li>Operating income is &lt;30% from regulated assets, but the presence of other midstream assets or extensive vertical integration materially reduces cashflow volatility</li> </ul>	4.5	3.5	4.0	90	Structurally neutral to negative across the cycle
BB		<ul style="list-style-type: none"> <li>Good quality assets with little diversification and small size</li> <li>Merchant generator with focus on high CO<sub>2</sub> emitting technology</li> </ul>	<ul style="list-style-type: none"> <li>Exposure to market risk only partially mitigated through effective hedging, weak market position</li> <li>Emerging market risk</li> </ul>	<ul style="list-style-type: none"> <li>&lt;30% of operating income from regulated assets</li> <li>Minimal other mid-stream assets used to mitigate cashflow volatility</li> <li>Minimal portfolio/smoothing effects from vertical integration</li> </ul>	6.0	3.0	3.5	100	Structurally negative across the cycle
B		<ul style="list-style-type: none"> <li>Low quality, small size, highly concentrated assets</li> <li>Merchant generator with a single generation, highly polluting technology</li> </ul>	<ul style="list-style-type: none"> <li>High levels of market risk and minimal (or ineffective) hedging, niche market position</li> <li>High exposure to political or event risk</li> </ul>	<ul style="list-style-type: none"> <li>De minimis operating income from regulated or quasi-regulated assets</li> <li>No other mid-stream assets used to mitigate cash flow volatility</li> <li>No portfolio/smoothing effects from vertical integration</li> </ul>	6.5	2.5	3.0	100	Structurally negative across the cycle

General  
 • Predictable profile, if economic-regulated activities  
 • Capital intensive industry  
 • Price and volume risk - to varying degrees  
 • High barriers to entry

  Current      Forecast

Indicative factors observed or extrapolated for rated issuers in developed markets. Ratio levels refer to the mid-point of a through-the-cycle range; actual observations are likely to vary from these. Certain sub-sectors may contain a small number of observations; where no observations currently exist, guidelines for a category are extrapolated based on Fitch judgement. The factors give a high-level overview and are neither exhaustive in scope nor uniformly applicable. Additional factors will influence ratings, particularly in emerging markets and where group relationships constrain or enhance a rating level.

Peer Group

Issuer	Country
<b>A-</b> CEZ, a.s.	Czech Republic
<b>BBB+</b> PGE Polska Grupa Energetyczna S.A.	Poland
<b>BBB</b> ENEA S.A. ENERGA S.A. Slovenske elektrarne, Slovakia a.s. TAURON Polska Energia S.A.	Poland
<b>BB+</b> Bulgarian Energy Holding EAD EP Energy, a.s.	Bulgaria Czech Republic

Issuer Rating History

Date	FC LT IDR	Outlook/ Watch
1 Mar 13	BB+	Stable

Immediate Peer Group – Comparative Analysis

Sector Characteristics

Operating Risks

Central European (CE) electric utilities have performed relatively predictably, despite their varying degrees of vertical integration. The regulated segments, such as electricity distribution, or the quasi-regulated segments, such as renewables or heat generation, enhance business profiles through high cash flow visibility in transparent and supportive regulatory regimes. Power generation is a higher-risk and more volatile segment, due to its exposure to changes in fuel and electricity prices, and electricity demand. Strong incumbency, as in the Czech Republic, Slovakia or Bulgaria, or limited openness as in Poland, support the generation segment to a degree.

Financial Risks

The financial profiles of CE utilities benefit from relatively solid and stable cash flow generation, but risks have surfaced in an environment of European macroeconomic stress. Fitch expects negative free cash flow in the mid-term for the utilities, due to large capex plans with limited short-term flexibility. Access to capital market funding differs among companies, with some companies being frequent issuers like CEZ, and others for whom market access is yet to be proven. CE utilities have demonstrated good access to bank funding to date.

Key Credit Characteristics

Large utilities with solid business profiles and strong to medium financial profiles generally command investment-grade ratings. Ratings depend both on business factors – including market presence, degree of vertical integration, generation mix and earnings diversification – and on financial factors such as financial policy, leverage, profit margins, capex plans and approach to M&A activity. Most rated CE utilities have solid credit ratios. Ratings reflect the expectation for FFO adjusted net leverage to rise to around 3x in the medium term for most issuers.

Peer Group Table of CE Electric Utilities Rated by Fitch (FY12)

	CEZ A-/ Stable	PGE BBB+/ Stable	ENEA BBB/ Stable	Tauron BBB/ Stable	SE <sup>c</sup> BBB/ Stable	ENERGA BBB/ Stable	EPE BB+/ Stable	BEH BB+/ Stable
Main shareholder (stake)	Czech state (69.4%)	Polish state (62%)	Polish state (51%)	Polish state (30%)	Enel S.p.A. (66%)	Polish state (84.2%)	PPF Group NV (44.4%)	Bulgarian state (100%), one notch rating uplift for state support
Rating headroom	Limited	Large	Large	Medium	Limited	Low	Medium	Low
Integration	Full	Full	Medium	Full	Low	Medium to low	Medium	Electricity (full), gas (midstream, downstream)
Generation capacity (GW)	15.1	12.9	3.2	5.6	5.7	1.2	3.2 <sup>a</sup>	6.2
Generation mix (%)	44 Nuclear, 50 Lignite and hard coal	69 Lignite, 22 Hard coal	96 Hard coal, 2 Hydro, 2 Wind	93 Hard coal	43 Hydro, 32 Nuclear, 25 Coal	73 Hard coal, 21 Hydro, 6 Biomass	95 Lignite	54 Nuclear, 36 Lignite, 9 Hydro
Regulated EBITDA (%)	20	25	44	51	0	75	38 <sup>b</sup>	30 (50 including gas transit)
Own coal/ lignite mining	Yes (60% of needs)	Yes (67% of needs)	No	Yes (25% of needs)	No	No	Yes	Yes (100% of needs)
Expected FCF in mid-term	Negative	Strongly negative	Strongly negative	Strongly negative	Negative	Strongly negative	Positive	Negative
Funding for mid-term capex	Frequent issuer	To be arranged	Secured	To be arranged	Partially secured	Partially secured	Secured	To be arranged
Credit metrics development	Maintaining current level	Gradual weakening	Gradual weakening	Gradual weakening	Steep weakening	Gradual weakening	Weaker due to M&A activity	Gradual weakening
FFO adj. net leverage (x)	2.2	-0.3	-1.1	1.3	1.5	1	2.5	2.4
FFO fixed charge cover (x)	9.8	123.4	23.0	17.5	16.7	9.8	4.4	8.4

<sup>a</sup> Mostly heat, <sup>b</sup> Including heat generation  
Source: Fitch

### Group Structure Diagram

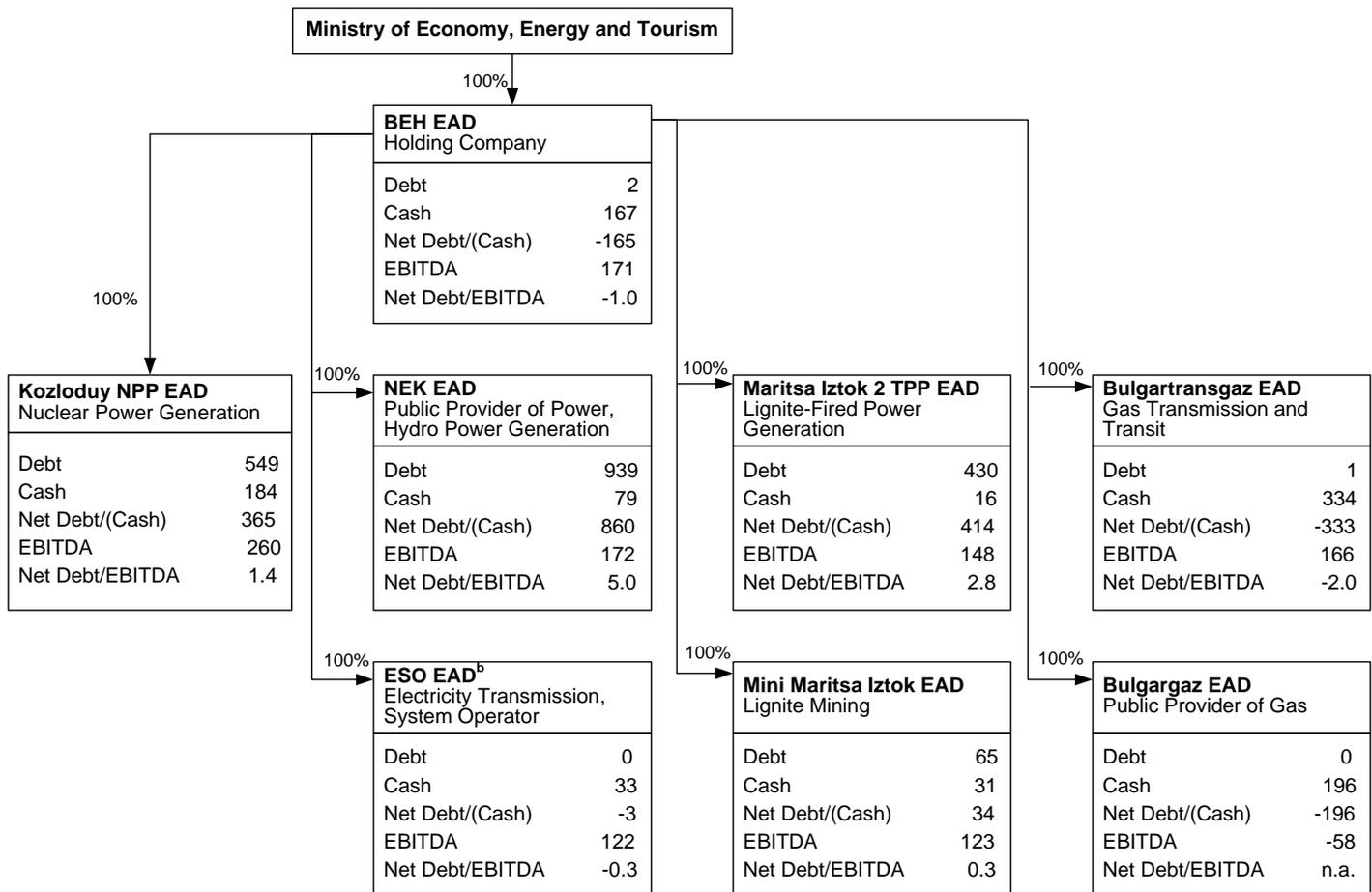
As per the table below, most of the group's debt at end-2011 was held at NEK (47% of total debt), followed by Kozloduy NPP (28%) and Maritsa Iztok 2 TPP (22%). NEK is the most leveraged company of the group with net debt/EBITDA of 5x. NEK's high leverage stems from the company's involvement in the stopped Belene nuclear power plant project, investments in hydro power plants and modernisation of the electricity transmission grid. The debt of Kozloduy NPP and Maritsa Iztok 2 TPP relates mostly to investment loans for power plants' modernisation.

Cash is held mainly at Bulgartransgaz (33% of total group cash at end-2011), Bulgargaz (19%), Kozloduy NPP (18%) and the holding company (17%).

*This diagram is a stylised summary of Fitch's understanding of the key features of the issuer group's legal structure at the date of publication. It is based on publicly available information. It cannot include all relevant details, or all subsidiaries, and may change over time.*

Figure 5

### BEH Group Structure (Financial Data for 2011, in BGNm)<sup>a</sup>



<sup>a</sup> Financials as per company information, not adjusted by Fitch; debt includes deferred financing of BGN290m, which relates mostly to Kozloduy NPP, Maritsa Iztok 2 TPP and NEK

<sup>b</sup> The ownership of ESO EAD will be transferred to BEH EAD from NEK EAD in 2013 within the unbundling process of the transmission system operator

Source: Company, Fitch

Historical Financial Information

**Bulgarian Energy Holding EAD**  
**FINANCIAL SUMMARY**

	31 Dec 2012 BGNm Year End	31 Dec 2011 BGNm Year End	31 Dec 2010 BGNm Year End	31 Dec 2009 BGNm Year End	31 Dec 2008 BGNm Year End
<b>Profitability</b>					
Revenue	6,446	6,011	5,151	4,631	4,955
Revenue Growth (%)	7.23	16.71	11.21	(6.53)	25.61
Operating EBIT	64	490	368	219	144
Operating EBITDA	607	1,027	877	696	640
Operating EBITDA Margin (%)	9.42	17.09	17.03	15.03	12.92
FFO Return on Adjusted Capital (%)	3.79	10.12	6.45	8.02	8.78
Free Cash Flow Margin (%)	(1.10)	9.18	4.64	(3.98)	(15.56)
<b>Coverages (x)</b>					
FFO Gross Interest Coverage	8.45	14.07	8.32	8.12	7.98
Operating EBITDA/Gross Interest Expense	11.93	12.44	9.19	5.61	5.82
FFO Fixed Charge Coverage (inc. Rents)	8.45	14.07	8.32	8.12	7.98
FCF Debt-Service Coverage	(0.03)	2.15	1.04	(0.08)	(1.97)
Cash Flow from Operations/Capital Expenditures	1.19	2.18	1.44	0.79	0.26
<b>Debt Leverage of Cash Flow (x)</b>					
Total Debt with Equity Credit/Operating EBITDA	2.76	1.94	2.34	2.87	3.21
Total Debt Less Unrestricted Cash/Operating EBITDA	1.74	0.96	1.59	2.21	2.34
<b>Debt Leverage Including Rentals (x)</b>					
Annual hire lease rent costs for long-term assets (reported and/or estimate)	0	0	0	0	0
Gross Lease Adjusted Debt/Operating EBITDAR	2.76	1.94	2.34	2.87	3.21
Gross Lease Adjusted Debt /FFO+Int+Rentals	3.64	1.82	2.98	2.38	2.62
FCF/Lease Adjusted Debt (%)	(4.23)	27.73	11.63	(9.23)	(37.55)
<b>Debt Leverage Including Leases and Pension Adjustment (x)</b>					
Pension and Lease Adjusted Debt /EBITDAR + Pension Cost	2.75	1.93	2.33	2.85	3.14
<b>Liquidity</b>					
(Free Cash Flow+Available Cash+Committed Facils)/(ST Debt + Interest) (%)	93.60	559.58	316.32	38.69	(34.75)
<b>Balance Sheet Summary</b>					
Cash and Equivalents (Unrestricted)	619	1,008	662	454	554
Restricted Cash and Equivalents	1	1	0	0	0
Short-Term Debt	589	215	228	861	243
Long-Term Senior Debt	1,087	1,776	1,829	1,134	1,810
Subordinated debt	0	0	0	0	0
Equity Credit	0	0	0	0	0
Total Debt with Equity Credit	1,676	1,991	2,057	1,995	2,053
Off-Balance-Sheet Debt	0	0	0	0	0
Lease-Adjusted Debt	1,676	1,991	2,057	1,995	2,053
Fitch- identified Pension Deficit	10	12	12	10	10
Pension Adjusted Debt	1,686	2,003	2,069	2,005	2,063
<b>Cash Flow Summary</b>					
Operating EBITDA	607	1,027	877	696	640
Gross Cash Interest Expense	(55)	(78)	(83)	(103)	(98)
Cash Tax	(62)	(49)	(51)	(50)	(42)
Associate Dividends	14	5	16	22	21
Other Items before FFO (incl. interest receivable)	(99)	112	(152)	169	164
<b>Funds from Operations</b>	<b>406</b>	<b>1,018</b>	<b>608</b>	<b>734</b>	<b>686</b>
Change in Working Capital	38	155	346	(219)	(418)
<b>Cash Flow from Operations</b>	<b>444</b>	<b>1,173</b>	<b>954</b>	<b>515</b>	<b>268</b>
Total Non-Operating/Non-Recurring Cash Flow	0	0	0	0	0
Capital Expenditures	(374)	(538)	(663)	(652)	(1,020)
Dividends Paid	(141)	(83)	(52)	(47)	(18)
<b>Free Cash Flow</b>	<b>(71)</b>	<b>552</b>	<b>239</b>	<b>(184)</b>	<b>(771)</b>
Net (Acquisitions)/Divestitures	0	0	0	0	0
Net Equity Proceeds/(Buyback)	0	0	0	200	500
Other Cash Flow Items	(3)	(140)	(93)	(58)	(176)
Total Change in Net Debt	(74)	412	146	(42)	(447)
<b>Working Capital</b>					
Accounts Receivable Days	35	30	28	32	32
Inventory Days	48	53	62	66	53
Accounts Payable Days	69	66	64	64	48

Figure 6

**Reconciliation of Key Financial Metrics for BEH Group**

<b>(BGNm)</b>	<b>31 Dec 12</b>	<b>31 Dec 11</b>
Interest bearing loans and borrowings	1,377	1,701
+ Deferred financing	299	290
= Total senior debt	1,676	1,991
+ Subordinated debt	0	0
- Equity credit	0	0
= Total debt with equity credit	1,676	1,991
+ Total off-balance sheet debt (8 x long-term leases)	0	0
<b>= Total lease-adjusted debt (a)</b>	<b>1,676</b>	<b>1,991</b>
- Cash and equivalents (unrestricted)	619	1,008
<b>= Net lease-adjusted debt (b)</b>	<b>1,057</b>	<b>983</b>
Cash flows from operating activities (as reported)	406	1,142
+ Reversal finance charge	54	78
+ Reversal taxation paid	62	49
<b>= Net cash from operating activities (adjusted by Fitch)</b>	<b>522</b>	<b>1,269</b>
- Net finance charges (c)	31	52
- Taxation paid	62	49
+ Dividend received (recurring)	14	5
= Cash flow from operations	444	1,173
- Change in working capital <sup>a</sup>	38	155
<b>= Funds from operations (FFO) (d)</b>	<b>406</b>	<b>1,018</b>
Gross interest paid (e)	54	78
Long-term (LT) leases (f)	0	0
<b>FFO adjusted net leverage (x)</b>		
Net lease-adjusted debt/(FFO + net finance charge + LT leases) (b/(d+c+f))	2.4	0.9
<b>FFO fixed charge cover (x)</b>		
(FFO + gross interest paid + LT leases) / (gross interest paid + LT leases) ((d+e+f)/(e+f))	8.4	14.1
<b>FFO gross interest coverage (x)</b>		
(FFO + gross interest) / gross interest ((d+e)/e)	8.4	14.1

<sup>a</sup> Change in working capital is based on Fitch's calculation and the additional information provided by the company.  
Source: Fitch based on company reports

The ratings above were solicited by, or on behalf of, the issuer, and therefore, Fitch has been compensated for the provision of the ratings.

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