

Critical analysis of the project for the construction of Tuzla thermal power plant unit 7

Report

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Summary

The public company Elektroprivreda BiH is developing a project for the construction of unit 7 at the Tuzla lignite-fired power plant, for which a consortium of China Gezhouba Group Co Ltd and Guandong Electric Power Design Institute has been chosen. It is likely that the construction will be financed by means of a preferential buyer's loan and implemented via a turnkey EPC contract (engineering, procurement, construction) whose net price without VAT would be EUR 785 650 000 while the loan itself would make up 85% of its value, ie. EUR 667 802 500.

If the state decides to forego VAT on the construction of Tuzla power plant unit 7, this will constitute state support which is potentially problematic considering Bosnia and Herzegovina's legal and international obligations. In addition the Government is considering signing a long-term power purchase contract with JP Elektroprivreda BiH which would guarantee the purchase of the energy generated, which is for the same reason questionable – and *a priori* creates uncertainty for households which may have to pay more than necessary for their electricity.

The key financial indicators presented in JP Elektroprivreda BiH's document have been derived in an unclear manner, but even with these figures it is clear that the project is poorly grounded. In the reference calculations there is no analysis of profitability of an alternative project with which Tuzla 7 could be compared, and nor is the public given any information about the likelihood of the costs of construction deviating from the ones agreed. It is this which presents a threat to the public budget, or rather for citizens who will ultimately provide a guarantee for this work worth around 5% of Bosnia and Herzegovina's GDP. This is all the more so as the example of the Šoštanj power plant in Slovenia (unit TEŠ 6) tells us that the planned costs of construction of such installations can be overshoot by several hundred million Euros. In addition, in this project one of the key variables is the price of coal, which has in recent years risen to levels which are unacceptable if the project is to be profitable.

The facts that the loan conditions named are preliminary and that a further loan is being considered for the Kreka lignite mine in the framework of this project do not inspire confidence that this project is economically feasible.

1. Introduction

After the 2010 Decision of the Federation of BiH on the Declaration of National Interest and Approaching the Preparation and Construction of Priority Electrical Energy Installations in the Federation of Bosnia and Herzegovina¹ work was begun on planning the construction of Unit 7 at the Tuzla power plant. The Elektroprivreda BiH d.d. Sarajevo public enterprise was tasked with the preparation and realisation of its construction,² which will be financed through joint investment by the aforementioned enterprise and project partners which were to be chosen through a tender.³ Tuzla lignite-fired power plant Unit 7 will serve as a replacement for some units which have already ceased to function and for others which will no longer operate in the future. It is at the same time to be a co-generation installation in which heat energy will be produced for nearby settlements and the project is also meant to ensure the restructuring of the Kreka lignite mine⁴, which is exceptionally important for this project⁵. A consortium consisting of China Gezhouba Group Co Ltd and Guangdong Electric Power Design Institute was chosen as the best bidder for this contract.⁶ A draft PCA (Project Cooperation Agreement) was included as an integral part of the final offer from CGGC-GEDI and provides a basis for a Project Partnership and Implementation Plan for the Construction of Tuzla Unit 7⁷.

In the document we are examining here there is very little information about the offer itself, but still with its help we are able to examine the economic sustainability of the partnership with this consortium for JP Elektroprivreda BiH and/or for the Federation of BiH. Although JP Elektroprivreda BiH maintains that "with the construction of unit 7 under the conditions from the final bid by the CGGC-GEDI consortium, all the goals from the Long-term balance sheet and business projections of JP Elektroprivrede BiH d.d. – Sarajevo are satisfied,"⁸ the project is, to say the least, of questionable profitability and may cause high costs for citizens themselves (through potential state support or in case attempts are made to load other costs onto them). However, the planning of the project is highly untransparent considering the lack of information surrounding it. In the remainder of this paper we provide an analysis of the economic side of this project, along with an explanation of its likely unfeasibility.

2. Analysis of the project's economic indicators

According to the very scant information about the chosen financial model for this project, we know the following: „15% of the value of the EPC contract will be provided by JP Elektroprivreda BiH d.d. – Sarajevo as participation with its own capital; - 85 % of the value

1 <http://www.fbihvlada.gov.ba/bosanski/zakoni/2010/odluke/38hrv.htm>.

2 <http://www.fbihvlada.gov.ba/bosanski/zakoni/2010/odluke/38hrv.htm>, Article III.

3 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboruprojektne partnere za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa, Sarajevo: JP Elektroprivreda BiH, p. 3 (available at http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

4 Ibid, p. 7.

5 <http://lukavac.ba/opcina-lukavac/obracanje-envera-omazica-generalnog-direktora-rudnika-kreka-tuzla/>

6 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboruprojektne partnere za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa", Sarajevo: JP Elektroprivreda BiH, p. 15 (available at: http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

7 Ibid, p. 15; in the original document the text is in bold font.

8 Ibid, p. 39.

of the EPC contract will be provided as a loan by the Export-Import Bank of China under the following conditions: a) PBC credit (Preferential Buyer's Credit) – Grace period ...5 years - Period for payback of the loan ...15 years – Interest rate ...2% - Commitment Fee ...0.25 % - Management Fee ...0.25 %⁹. It is a PBC (Preferential Buyer's Credit) option which is being considered, with a turnkey EPC (engineering, procurement, construction) contract, which specifies a net price without VAT of EUR 785 650 000. Of this, equipment supply amounts to EUR 515 359 956, labour EUR 254 376 347 and services EUR 15 913 696¹⁰. There is also another bid with a price around EUR 50 million higher, however it is economically unfeasible, as shown below. Already with this information two problems are evident:

- Considering that the "project will be financed from the proceeds of a loan from the Exim Bank of China (up to 85% of the EPC contract) and JP Elektroprivreda BiH d.d. – Sarajevo's own capital,"¹¹ the calculation in the document should have clearly shown how much is 85% of the contract and how much is 15% of it. Furthermore, for the 15% the interest rate should have been shown at which JP Elektroprivreda BiH will borrow the additional money, ie. how much is the cost of capital which JP Elektroprivreda BiH has to take into account. Only recently was information published that the loan from ExIm would amount to EUR 667 802 500 (which is 85% of the aforementioned EPC contract of EUR 785 650 000)¹²
- If the state decides to forego VAT on the construction of Tuzla power plant unit 7, this will constitute state support in line with the laws of BiH which are also derived from BiH's obligations from international agreements.¹³ Although information about this does not appear to be publicly available, if the VAT rate of 17% percent was applied to the whole cost of construction of unit 7 (EUR 785 650 000), the value of the support from the state would be EUR 133 560 500. This raises the question whether the state is ready to forego such a large income and why for this project for which no alternatives have been mentioned?

In addition, the project partnership rests on several principles of which the most controversial is the following one "The government supports the signing of a long-term contract via which raw materials for the long-term functioning of unit 7 will be guaranteed"¹⁴. And in view of the fact that in the document a long-term power purchase agreement for the purchase of electricity is also mentioned, such contracts may be problematic as they may represent hidden subsidies. It is not possible to *a priori* know whether such assistance is in compliance with the Energy Community or with obligations resulting from BiH's agreements with the European Union¹⁵.

9 Ibid, p. 16.

10 Ibid, p. 18.

11 Ibid, p. 19.

12 http://www.fbihvlada.gov.ba/bosanski/aktuelno.php?akt_id=4483.

13 See BiH legislation on state aid: Zakon o sistemu državne pomoći u Bosni i Hercegovini, Službeni glasnik BiH 10/12 and http://www.fbihvlada.gov.ba/bosanski/sjednica.php?sjed_id=326&col=sjed_saopcenje.

14 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboruprojektneog partnera za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa, Sarajevo: JP Elektroprivreda BiH, p. 9 (available at: http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

15 See <http://www.fbihvlada.gov.ba/bosanski/zakoni/2013/uredbe/26.html> and <http://ekotim.net/en/95-novosti/klimatske-promjene/298-blok-7-te-tuzla-ko-ce-platiti-najvrijedniju-poslijeratnu-investiciju-u-bih-da-li-ce-donosioc-odluka-podrzati-jos-jednu-nesigurnu-investiciju>.

The key financial indicators in JP Elektroprivreda BiH's document¹⁶ have been calculated in a very unclear way, however even now it is clear that the project is on shaky legs. The bidder and consultant have made an estimate for the internal rate of return (IRR)¹⁷ for the project for both of the net prices offered, but for this paper we focus primarily on the more favourable offer of EUR 785 650 000. For this figure, the bidder arrived at an internal rate of return (IRR) of 10.93%, but the consultant calculated 11.63%. The net present value (NPV) was also calculated.¹⁸ The bidder calculated it at EUR 46 million but the consultant calculated it as EUR 54.644 million¹⁹. However if the loan will be in Euros, JP Elektroprivreda, if it continues with the practices until now, will carry the currency risk, and the company will carry the general financial risk, as there are no corresponding procedures to prevent this²⁰. Nowhere in the available document are the exact costs and incomes mentioned on which these indicators are calculated, so we cannot verify them. But considering that this consortium is participating in the project as main contractor,²¹ the likelihood of the costs deviating from those agreed needs to be estimated, however so far this has not been done. This in practice leaves open the possibility of a price rise before the signing of the final contract. However we know that in such complex and long-term projects the value of the financial indicators is quite unreliable in terms of declaring this project to be financially feasible. Here we mention just three reasons why:

- The IRR for the bid which was only around EUR 50 million more expensive is in the bidder's version 2.29%, while the consultant calculated 2.09%. However for the NPV, the consultant only mentioned that it is negative, while the bidder calculated that the value is down to minus EUR 190 million²²!
- In the reference calculation,²³ nowhere is the profitability of an alternative project analysed, for example investing in alternative sources of energy
- The example of the 600 MW Šoštanj lignite power plant unit 6 in Slovenia (TEŠ 6) which at the beginning was estimated at EUR 602 million, but by now has so far climbed to EUR 1.43 billion bears witness to the fact that the final costs of an investment may exceed the plan by several times. In addition, instead of 3500

16 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboru projektnog partnera za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa, Sarajevo: JP Elektroprivreda BiH (available at: http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

17 Internal rate of return (IRR) is "the discount rate ... that makes the net present value of all cash flows from a particular project equal to zero." (<http://www.investopedia.com/terms/i/irr.asp>)

18 This is "the difference between the present value of cash inflows and the present value of cash outflows" (<http://www.investopedia.com/terms/n/npv.asp>).

19 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboru projektnog partnera za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa, Sarajevo: JP Elektroprivreda BiH, p. 20-21 (available at http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

20 JP Elektroprivreda BiH (2013), Unconsolidated annual report: 31 December 2013., Sarajevo: JP Elektroprivreda BiH, p. 17.

21 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboru projektnog partnera za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa", Sarajevo: JP Elektroprivreda BiH, p. 19 (available at http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

22 Ibid, p. 20-21.

23 Ibid.

employees, the installation currently employs only 450 people²⁴, of which it is planned to sack 226²⁵.

One of the main variables in this project is the price of coal, which in recent times has risen to levels which are unacceptable for the profitability of the project. JP Elektroprivreda BiH clearly states that "the price of coal should not rise above the current level which is already now above the price foreseen in the investment documentation for unit 7 (4.75 KM/GJ), or the target price in the Action Plan for Mine Modernisation (4 KM/GJ). In the event that it does, the competitiveness of the current generation and feasibility of the realisation of the new units will be threatened"²⁶. However, Bankwatch obtained an answer from the Regulatory Commission for Energy in the Federation of Bosnia and Herzegovina (FERK) that the prices of coal are still defined by decisions of the government of the Federation of BiH and that the price for power plants is 4.70 KM/GJ for surface mines and as much as 5.00 KM/GJ for underground exploitation²⁷. These prices definitely put the financial feasibility of the project in question, all the more if we know that production price at the Kreka mine has been significantly higher than any of the prices mentioned so far. Namely in 2010 it was 6.15 KM/GJ, in 2011 – 6.13 KM/GJ, and in 2012 climbed to as much as 7.18 KM/GJ²⁸. In other words this clearly suggests that the economic background for the project is threatened. It is known that the "quality of coal which is contracted for use in the power plants varies to a large extent. This is even more accentuated in the case of Tuzla power plant as the heating value of the lignite from the Kreka mine is in constant decline from year to year and the Đurđevik mine likewise supplies brown coal with a low heating value"²⁹.

In the case of Tuzla unit 7 it is a matter of concern that in addition to all this, the loan conditions are only preliminary³⁰. There is also a loan for an additional EUR 100 million under consideration for the Kreka mine³¹. If these EUR 100 million are necessary for the normal functioning of Tuzla unit 7, which seems likely according to the documents examined, then this whole project is unfeasible by this criterion alone. However in case unit 7 is built and JP Elektroprivreda BiH is not able to pay back the loan then it will be paid by the Federation of BiH, or potentially the public, if there is an attempt to pass the costs onto them. This is to be guaranteed by a "sub-sovereign guarantee by the government of the Federation of BiH or sub-sovereign borrowing plus mortgage on unit 7, escrow account for the income from the power purchase agreement and guarantee from JP Elektroprivreda BiH d.d. - Sarajevo"³².

24 <http://bankwatch.org/news-media/for-journalists/press-releases/sostanj-lignite-plant-mistake-not-be-repeated>.

25 <http://www.delo.si/gospodarstvo/podjetja/zagon-bloka-6-delavci-na-cesto.html> prema Živčič, L., with contributions from P. Gallop and B. Kvac (2014), Economics mythbuster TEŠ6, Focus Association for Sustainable Development, no page number.

26 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboruprojektne partnera za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa", Sarajevo: JP Elektroprivreda BiH, p. 31 (raspoloživo na http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

27 Answer by FERK from 11 November 2014 to Bankwatch request by e-mail.

28 JP Elektroprivreda BiH (2014), Dugoročni plan razvoja Elektroprivrede BiH do 2030. sa Strategijskim planom, JP Elektroprivreda BiH: Sarajevo, p. 246.

29 Ibid, p. 243.

30 JP Elektroprivreda Bosne i Hercegovine (2014): Informacija o aktivnostima na izboruprojektne partnera za zajedničko ulaganje u projekat izgradnje bloka 7 u TE Tuzla: Treća faza tenderskog procesa", Sarajevo: JP Elektroprivreda BiH, p. 17 (available at http://predstavnickidom-pfbih.gov.ba/upload/file/sjednice/31_sjednica/28.pdf).

31 Ibid, p. 16, 37.

32 Ibid, p. 16.

3. Conclusion

The planning for the construction of unit 7 of the Tuzla power plant is being carried out in an exceptionally untransparent way. Many of the details which would enable the people of Bosnia and Herzegovina to clearly examine the project – which is worth around 5% of BiH's GDP - are hidden³³. The final figure necessary for the construction of this installation and the execution of the whole project remains undefined, as the existing one may still be changed. In addition it is possible that the project may benefit from direct or indirect state aid, which would make it even more expensive for taxpayers. However in case of non-profitability or failure to pay back the loan, the burden will be on the Federation of BiH or JP Elektroprivreda BiH, and will therefore in the end fall on the public.

On the basis of the currently available information about the financial indicators which JP Elektroprivreda BiH has shown, we can conclude that the profitability of the project problematic to say the least. This results not only from the real possibility that the planned costs of the project will be exceeded but also due to the price of coal which has risen to extremely high and unfavourable levels, which threaten and probably also negate the project's economic justifiability.

33 For the data about GDP, see: <http://data.worldbank.org/country/bosnia-and-herzegovina>.