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## The economics of Pljevlja II coal plant – smoke, mirrors and EU law derogations

### Preliminary analysis of information about Pljevlja II coal power plant presented to the Montenegrin government on 11.07.2016<sup>1</sup>

#### Introduction

Montenegrin utility Elektroprivreda Crne Gore (EPCG) - 57%-owned by the Montenegrin state and 41.75%-owned by Italy's A2A<sup>2</sup> - plans to construct a new 254 MW lignite-fired power plant near the existing Pljevlja thermal power plant in northern Montenegro. The plant would most likely be built by the Czech company Škoda Praha, with financing from the Czech Export Bank (CEB) and insurance from Czech agency EGAP.

The topic has become a major point of disagreement between the Montenegrin government and A2A in the last two years, as they sought to agree on a prolongation of the shareholding and management agreement for EPCG that expired on 1 April 2015. While the Montenegrin government is forcefully pushing the project forward, A2A is more sceptical about its economics and does not want to be exposed to the project's risks.

In recent months, new sense of urgency has gripped the Montenegrin government, for two reasons:

- A general election is planned to take place on 16 October 2016.
- From 01.01.2017, the CEB - as all export credit agencies participating in the OECD Arrangement on Officially Supported Export Credits<sup>3</sup> - will no longer be able to support coal plants of the type and capacity planned at Pljevlja (supercritical, 254 MW) in developed countries like Montenegro.

The Montenegrin government is now pushing a series of decisions through at a very high speed:

- A temporary renewal of the **shareholding and management agreement with A2A**, which would be valid only until 31.12.2016, has been approved by the Montenegrin government and submitted to the Parliament under an expedited procedure.
- On 7 July the Montenegrin government adopted a **draft interstate protocol with the Czech Republic**<sup>4</sup>, intended to legalise the selection process in which Škoda Praha was chosen as most likely EPC contractor without a standard tender. The document has been submitted to the Montenegrin parliament for approval as soon as possible.
- On 11 July the Montenegrin government approved an **information document on the economic feasibility of the Pljevlja II project**<sup>5</sup>.

This latter document exhibits a number of evident weaknesses which together cast serious doubt on the project's viability. Moreover the document reveals that the Montenegrin government aims to delay the implementation of the EU Emissions Trading Scheme (ETS) Directive until 2026 at the earliest in order to improve the poor economics of the project.

Such desperation to push the project through despite obvious weaknesses raises concerns about possible special interests and corruption. The fact that the Prime Minister's brother, Aco Đukanović owns an 11% share in the Pljevlja lignite mine<sup>6</sup> raises obvious red flags with regard to the government's ability to balance public and private interests.

#### Recommendations

- **A2A, as a major shareholder in EPCG, needs to insist on a realistic analysis of the project's economics based on realistic assumptions regarding CO2 costs, electricity price and coal and water costs.**

1 Document available at: [http://www.gov.me/sjednice\\_vlade/165](http://www.gov.me/sjednice_vlade/165) (first document).

2 <http://www.scmn.me/fajlovi/EPCG201512.pdf> The remainder of the shares are owned by a variety of smaller shareholders

3 <http://www.oecd.org/tad/xcred/theexportcreditsarrangementtext.htm>

4 [http://www.gov.me/sjednice\\_vlade/164](http://www.gov.me/sjednice_vlade/164) point 33.3

5 [http://www.gov.me/sjednice\\_vlade/165](http://www.gov.me/sjednice_vlade/165), first document

6 <http://www.rupy.me/vlasnicka-struktura>

- The Czech Export Bank and EGAP need to re-examine the project's economics in order to avoid exposing themselves to undue risk.
- The European Commission must not allow Montenegro to receive unjustified special treatment regarding implementation of the ETS Directive.

#### **Summary of main comments:**

- The entire analysis and its conclusion that the project is economically viable is premature, as **the final cost of the EPC contract has not been agreed between EPCG and Škoda Praha**. The cost used for the analysis is EPCG's latest proposal of EUR 321 million, but this has not yet been agreed by Škoda.
- **The claim that the plant is feasible relies on several questionable assumptions**, relating to payment for CO2 emissions, electricity wholesale prices, the price of coal and water.
  - The study **assumes that the Montenegrin government will manage to negotiate a delay in implementing the EU ETS until 2026**. Delayed implementation of ETS has not been the practice so far for states acceding to the EU in recent years and it is unclear why Montenegro should be an exception.
  - **The forecast wholesale electricity prices seem very high**, reaching 97 EUR/MWh by 2040 without inflation. The study takes a price 10% lower in order to appear "conservative" in its calculations but this price is still quite high and may never materialise. Moreover it for no clear reason couples a 10% lower electricity price with a 10% lower CO2 emissions price in the name of making a "conservative" calculation, but in fact this is the opposite of conservative, because lower CO2 costs do not pose a risk to the plant, but rather help it become feasible. **If the wholesale price of electricity turns out 20% lower than expected, the investment is unfeasible**. Considering the inexact nature of such forecasting, this seems quite a possible scenario.
  - **It is assumed that production costs at the captive lignite mine will be reduced from 24.21 EUR/tonne in 2015 to 17-17.5 EUR/tonne in 2027**. However it is far from certain that such significant cost cuts will be achieved.
  - **It is assumed that costs for water will be EUR 0.02 per m<sup>3</sup>**. This extremely low cost does not seem likely to recover costs. The compliance of this price with the Water Framework Directive Article 9 would need to be examined carefully, as well as the issue of possible state aid.
- **VAT is not expected to be paid on the equipment for the power plant**. This is in line with recent changes to Montenegrin legislation, but decreases the investment's value for the state and raises issues about state aid.
- In order to reach the desired cost of production from the mine, **the number of workers would have to be reduced by almost half**. It is not clear whether there is any plan to ensure that this happens in a just and socially sensitive manner.

#### **Detailed comments:**

##### **1. The final cost of the EPC contract has not been agreed between EPCG and Škoda, therefore the economic analysis is premature and final conclusions about feasibility cannot be drawn.**

In section 2.2. *Works contract (Ugovor o izvođenju radova)* on p. 4-5 the text states that "*The parties have entirely agreed on the basic elements of the contract from the legal, technical and commercial-financial angles, with the exception of the price for the whole project of building unit 2 of Pljevlja thermal power plant, which is still not arranged...*". Further details about the negotiations on price are given on page 7 and 8, from which it is clear that several elements are still pending.

##### **2. The claim that the plant is feasible relies on several questionable assumptions and seems unlikely.**

###### **2.1 The study unjustifiably assumes that the Montenegrin government will manage to negotiate a delay in implementing the EU ETS until the beginning of 2026.**

According to p.52 of the Deloitte presentation that forms part of the government information document, it is stated that the plant would start commercial operations in 2020, but only start paying for CO2 emissions allowances in 2026.

On p.11 of the Deloitte presentation, it is stated that: “*The start date for carbon emissions fees has a large impact on the NPV of the project, bearing in mind that a one-year earlier start date for applying carbon emissions fees decreases the NPV of the project from around EUR 47.9 million to around EUR 27.2 million.*” The explanation given on the same page shows that the basic scenario refers to 31.12.2025 (ie. start of payments effectively begins in 2026), and the one-year earlier scenario refers to 31.12.2024.

Moreover, it is later – p.55 of the presentation - revealed that “*On the basis of a letter from the Ministry of Sustainable Development and Tourism, the assumption is that application of carbon emissions fees will begin in 2026 with a 13% transition. A full 100% transition will be realised in 2031.*”

It is not clear what any of these assumptions are based on. The year of Montenegro’s entry to the EU has not been confirmed, so it is not possible to say for sure when the implementation of the ETS will have to begin. However if the accession is to keep up any kind of momentum, it will need to be completed well before 2026. Delayed implementation of the ETS has not been the practice so far for states acceding to the EU and it is unclear why Montenegro should be an exception. This would interfere with the creation of a level playing field in the EU and Energy Community electricity market.

At the time of writing, the conclusions of the government session of the 11 July have not been published, however the draft conclusions included in the information document (p.19 of the PDF) explicitly require “*the Ministry of Sustainable Development and Tourism, in the continuation of its negotiations with the European Commission, regarding the application of CO2 standards, to take the position that the CO2 Emissions Trading System be delayed until the maximum possible period from the day of Montenegro’s accession to the EU.*”

Moreover, irrespective of Montenegro’s EU accession, the Energy Community, of which Montenegro is a Contracting Party, may adopt the Emissions Trading Scheme within the next few years, as recommended in 2014 by a High Level Reflection Group appointed to consider the future of the Treaty.<sup>7</sup> It therefore seems highly risky to assume that the start of ETS implementation can be delayed until 2026.

## **2.2. The forecast wholesale electricity prices prepared by Poyry seem high**, reaching EUR 97/MWh in real terms by 2040, or EUR 143/MWh with 2% inflation added for every year.

For comparison, a study undertaken for the German government forecasts electricity wholesale prices of EUR 83<sup>8</sup>/MWh by 2040.<sup>9</sup> It is true that there are price differences between central Europe and more outlying countries like Italy and the Western Balkans today but as the regions become better interconnected these differences should diminish.

Even the UK, which has high electricity costs by European standards due to being an island (around £48/MWh or EUR 57.6 per MWh in 2015) predicts reference electricity prices of £61 or EUR 73/MWh in 2035 (in 2015 prices),<sup>10</sup> compared to EUR 90.5/MWh in the Deloitte presentation.

In calculating the wholesale price including inflation, the study uses a price 10% lower than Poyry’s “middle scenario” in order to appear “conservative” in its calculations but this price is still quite high and may never materialise.

Moreover p.55 of the Deloitte presentation states that the study couples a 10% lower electricity price with a 10% **lower** CO2 emissions price in order to make a “conservative” calculation. In fact this is the *opposite* of conservative, because *lower* CO2 costs do not pose a risk to the plant, but rather help it become feasible. This raises suspicions that the calculations have been adapted in order to ensure the “right” outcome, as few decision-makers in Montenegro are familiar with the EU Emissions Trading Scheme and are unlikely to notice this issue.

7 [https://www.energy-community.org/portal/page/portal/ENC\\_HOME/DOCS/3178024/0633975AD9F97B9CE053C92FA8C06338.PDF](https://www.energy-community.org/portal/page/portal/ENC_HOME/DOCS/3178024/0633975AD9F97B9CE053C92FA8C06338.PDF)

8 2011 prices.

9 Prognos/EWI/GWS: Executive Summary: Development of Energy Markets – Energy Reference Forecast Project No. 57/12, Study commissioned by the German, Federal Ministry of Economics and Technology, June 2014  
<http://www.bmwi.de/BMWi/Redaktion/PDF/Publikationen/entwicklung-der-energiemaerkte-energierefenzprognose-executive-summary,property=pdf,bereich=bmwi2012,sprache=de,rwb=true.pdf>

10 The forecast does not reach as far as 2040. <https://www.gov.uk/government/publications/updated-energy-and-emissions-projections-2015,Annex M: Growth assumptions and prices>

The study itself admits that if the electricity prices turn out to be 20% lower than projected, the plant will be uneconomic (p. 11 Deloitte presentation).

**2.3. It is assumed that production costs at the captive lignite mine will be reduced from 24.21 EUR/tonne in 2015 to 17-17.5 EUR/tonne in 2027.** However it is far from certain that such significant cost cuts will be achieved.

The Pljevlja coal mine company has engaged the Fichtner consultancy to look into the coal reserves which are available and feasible to use for Pljevlja II. The study has not been published, but some conclusions on the reserves and methods for cost-cutting are included in the Deloitte presentation. One of the most important means to reduce costs would be to reduce the number of employees by around half, from 1013 in 2013<sup>11</sup> to 544 or 520 depending on the scenario by around 2025 (p.43 of the presentation). It is far from clear whether this will be politically feasible, and no plan to ensure that the layoffs are carried out in a just and socially sensitive manner appears to have been developed.

Even if the mine does manage to achieve a production cost of around EUR 17.5, this is not a particularly favourable price, according to a study by EY consultants<sup>12</sup> which compares 7 lignite-mining companies across eastern Europe and shows only one company which has costs per tonne of more than 15 EUR/tonne.

Discussion of production costs of course assumes that there are sufficient economic reserves to mine, however it is still far from sure that this is the case. Analyses have shown some of the deposits would not be economically feasible, and that there would not be enough lignite for the 40-year planned lifetime of the plant.<sup>13</sup> The government information document claims the new study shows sufficient coal reserves for the expected 40-year lifetime of the Pljevlja II plant.

**2.4 It is assumed that costs for water will be EUR 0.02 per m3. This extremely low cost does not seem likely to recover costs.** Water usage is estimated at 700 m3 per hour (p.54 of the Deloitte presentation). The compliance of this price with the Water Framework Directive Article 9 would need to be examined carefully, as well as the issue of possible state aid.

**3. The equipment for the power plant is expected to be exempted from VAT** (p.55 of the Deloitte presentation). This is in line with changes made to the Montenegrin legislation in 2014<sup>14</sup>, but decreases the investment's value for the state and raises issues about state aid.

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11 [http://www.rupv.me/sites/rupv.me/files/2013\\_-\\_izvjestaj\\_nezavisnog\\_revizora\\_rudnik\\_uglja\\_ad\\_pljevlja.pdf](http://www.rupv.me/sites/rupv.me/files/2013_-_izvjestaj_nezavisnog_revizora_rudnik_uglja_ad_pljevlja.pdf)

12 [http://www.ey.com/Publication/vwLUAssets/EY\\_European\\_Lignite\\_Mines\\_Benchmarking\\_2014/\\$FILE/EY-European-Lignite-Mines-Benchmarking-2014.pdf](http://www.ey.com/Publication/vwLUAssets/EY_European_Lignite_Mines_Benchmarking_2014/$FILE/EY-European-Lignite-Mines-Benchmarking-2014.pdf)

13 For more details, see <http://bankwatch.org/our-work/projects/pljevlja-ii-lignite-power-plant-montenegro>

14 The Law on amendments and supplements to the Law on Value Added Tax (Zakon o izmjenama i dopunama Zakona o porezu na odatu vrijednost), approved by the Montenegrin government on 25<sup>th</sup> December 2014. The changes add to the list of items on which zero percent VAT is paid (Article 25) the following:

"In Article 25 paragraph 1 after point 10, a new point is added which states:

„10a) supply of products and goods for the construction and equipping of hospitality facilities in the category of five star or higher, or energy production facilities;“