

Does the Kosovo Coal Project Fail the President's Climate Action Plan Test?

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Introduction

The President's Climate Action Plan (CAP) requires an end to U.S. Government (USG) support for public financing of new coal plants overseas, except for (a) the most efficient coal technology available in the world's poorest countries in cases where no other economically feasible alternative exists, or (b) facilities deploying carbon capture and sequestration technologies. The integrity of this policy is already being tested by the Kosovo lignite project currently being considered by the World Bank with support from USG agencies.

Despite the fact that available information demonstrates that the project does not meet the basic requirements of the President's CAP, USAID published a report on September 26, 2013, with the following assessment: "While it is too early to make a definitive determination, at this time the transaction appears to be not inconsistent with President Obama's call 'for an end to U.S. government support for public financing of new coal plants overseas, except for a) the most efficient coal technology available in the world's poorest countries in cases where no **economically feasible alternative exists**" [emphasis added by authors].

In fact, the available information on the Kosovo project clearly shows that the project is indeed inconsistent with the President's directive. This raises significant concerns about whether the President's commitment is being taken seriously by USAID, and whether the President's commitment should therefore be taken seriously by the public. In order to ensure the integrity of these policies and avoid undermining the President's CAP, US Government agencies must withdraw support for the Kosovo project.

1) Most Efficient Coal Technology Available

The President's Climate Action Plan requires that unabated coal plants use "the most efficient coal technology available" to be eligible for finance. The most efficient internationally available technology for combusting lignite is an advanced ultra supercritical (AUSC PC), ultra supercritical (USCPC) or supercritical (SCPC) plant with steam temperatures in the 600°C range and pressures above 265 bar. This technology results in a plant electrical efficiency of approximately 43 percent when combusting lignite.¹ This performance can be matched or exceeded by an integrated coal gasification and combined cycle gas turbine (IGCC). The performance of either of these systems can be further improved by drying the lignite, which may contain up to 60 percent moisture, using waste heat from the boiler and/or solar power to remove excess moisture. Benchmark lignite drying systems include RWE's WTA process and Vattenfall's PFBD process.

As early as 1999 the World Bank recognized that supercritical efficiencies were commercially available, reliable and suitable for use in the poorest countries.² However, most of the poorest countries do not have the capacity to manufacture either a subcritical or a super critical lignite plant. The major vendors of power plants (subcritical or supercritical) will ordinarily manufacture the major components at their own facilities outside of the host country and assemble those components onsite using boilermakers, crane operators, TIG welders,

¹ On a lower heating value (LHV) basis.

² <http://bit.ly/19Hllnt>

electricians, engineers and other skilled tradesmen that have been trained and employed by the vendor for a number of years rather than relatively unskilled indigenous workers employed for a single project. For this reason, any technology that is “available” in countries like China or India should be considered “available” in Kosovo. It should be noted that both India and China are among the biggest users of SC, USC, and AUSC technologies for lignite-fired power generation, confirming that each of those technologies is available in the international market.

There are over 400 coal or lignite-fired SC/USC/AUSC steam electric generating units in service around the world today. The benchmark lignite-fired supercritical unit appears to be the Niederaussem K unit which reports an efficiency of greater than 43 percent on a LHV basis.³ Other SC/USC lignite-fired units include the Schwarze Pump, Lippendorf, Boxberg, and Neurath plants in Germany, the Belachtow and Patnow plants in Poland and the Oak Grove plant in the United States.

Requests to the Kosovo government, the World Bank and the U.S. Department of the Treasury for a copy of the Request for Proposals (tender) issued by the Kosovo government in the Spring of 2013 have been denied, in violation of applicable Freedom of Information statutes. However, an economic analysis of the proposed Kosovo C project conducted on behalf of the World Bank and published in December, 2011, assumed that the new units would be subcritical CFBs with an efficiency of 38.2 percent. This is far less efficient than the 43 percent efficiency that has been achieved with USC when burning lignite.

There is one other potentially available technology that must be discussed – supercritical CFB (SC CFB). SC CFB has been commercially demonstrated at the Lagiza SC CFB plant in Poland, achieving a reported efficiency of 41.6% (LHV). However, this unit operates on coal, not lignite, and so SC CFB efficiency on lignite would not be expected to match the efficiency demonstrated by the USC lignite-fired units discussed above, but this technology is commercially demonstrated and is clearly more efficient than subcritical CFB technology. Subcritical lignite-fired PC and CFB boilers cannot by any technical measure be considered the most efficient technology available. While we must wait to see the results of the procurement to state definitively that the proposed lignite-fired project will not meet this criteria, the record thus far suggests that it likely will not meet the test in the CAP.

2) Poorest Countries

The President’s CAP limits support for unabated coal plants to the “world’s poorest countries.” The World Bank (WB) classifies Kosovo as “lower middle income” - with income substantially higher than the lower bound of “lower middle income countries.”⁴ The Climate Action Plan does not authorize an exception for plants in “lower middle income” countries.

³ Lower Heating Value – the normal basis for rating the efficiency of such units.

⁴ <http://data.worldbank.org/country/kosovo> ; <http://data.worldbank.org/indicator/NY.GNP.PCAP.CD>;
<http://www.decp.nl/countries/central-europe-and-caucasus/kosovo/>;

Nevertheless, USG agencies appear to have decided, at least tentatively, to use the World Bank's International Development Association's (IDA) "List of Borrowing Countries"⁵ as a surrogate for "poorest" countries. The IDA states:

“[e]ligibility for IDA support depends first and foremost on a country's relative poverty, defined as GNI per capita below an established threshold and updated annually (in fiscal year 2014: \$1,205).”

However, Kosovo's 2012 per capita GNI is listed at \$3,640⁶ which is three times the IDA threshold for eligibility based on poverty. Kosovo is not eligible for IDA based on income.

In addition to countries that are eligible for IDA support based on national income, IDA also supports some countries that are “above the operational cutoff but lack the creditworthiness needed to borrow from the International Bank for Reconstruction and Development.”

Kosovo is eligible for IDA support on this basis. Its credit rating (15) is among the worst in the world and so Kosovo likely does not meet IBRD creditworthiness requirements. For this reason, and not because it is one of the world's poorest countries, Kosovo is permitted to access loans through the IDA mechanism, but on IBRD terms rather than the IDA terms reserved for the world's poorest countries.

This is not to suggest that Kosovo should not receive development assistance in this manner or that the IDA should revise its criteria for providing different forms of assistance. Kosovo and the other “middle income, but poor credit rating,” countries on the list undoubtedly could use international assistance in improving the conditions of their populace. But, being on the IDA List of Borrowing Countries based on creditworthiness does not constitute a finding by IDA, or anyone else, that Kosovo is one of the world's poorest countries. Indeed, the detailed formulation of the list confirms that IDA does not consider Kosovo to be one of the world's poorest countries.

Creditworthiness is not a criterion specified in the CAP, and no amount of lawyering can turn Kosovo into one of the poorest countries in the world.

3) No Economically Feasible Alternatives

The President's Plan prohibits support for unabated coal projects unless “no economically feasible alternative exists.” Feasible means “capable of being done or carried out.” For an alternative to be economically feasible, it need not be less expensive than the proposal and in the context of the CAP, should be assumed to cost more than the proposal. To meet the CAP's test each potential alternative must be so expensive that it simply cannot be done.

⁵ <http://www.worldbank.org/ida/borrowing-countries.html>

⁶ This is a substantial improvement over the 2005 figure of \$1,800 per capita, Kosovo's GNI is now reasonably close to its neighbors and, if this trend of the past few years continues, Kosovo should match the GNI of those countries in just a few years.

There is no doubt that economically feasible alternatives exist. Our concern with the Kosovo C project has been largely driven by our assessment that it is a foolish waste of scarce resources. There are alternative options to meet Kosovo's energy needs that are substantially less expensive than the billion euros (or more) that will be wasted on a Kosovo C plant.⁷

The Kosovo government has been allowed to manage development of the alternatives analysis in the Kosovo C project ESIA. Historically, the Kosovo government has been strongly supportive of additional base load generation and, while acknowledging the need for peaking power alternatives and the exceedingly poor condition of the Kosovo transmission system, has refused for many years to seriously consider available alternatives to address these issues. The several acknowledgements of the RoK, the KEK and the international lending agencies of the significant technical and non-technical losses that, if addressed would offset a significant portion of the supposed "need" for the project, demonstrate that there are alternatives to the Kosovo C project. Similarly, these parties have all acknowledged a need for peaking capacity in Kosovo, but take no steps to address this alternative.

Instead of examining the economic viability of the available alternatives, the Kosovo government has cited (without support) alleged non-economic barriers. The fact that the Kosovo government, with the Kosovo C project as its highest priority, has slow-walked serious discussion with its neighbors to facilitate development of the Zhur HPP does not mean that hydropower is not part of an economically feasible alternative to address the country's needs for additional peaking capacity. Similarly, the fact that the Kosovo government has delayed issuing permits and reasonable power purchase agreements with wind power developers does not mean that wind power is not part of an economically feasible alternative extend the peaking capacity of Zhur HPP and otherwise address Kosovo's needs.

The bias demonstrated in earlier reports concerning the proposed lignite-fired plant raises significant concerns that the ESIA process will not identify or examine the full range of available alternatives – including accelerating the timetable for reducing the technical and non-technical losses that currently waste several hundred MW of existing generating capacity. Since management of the ESIA has been delegated to the advocates of the proposed project, we are also concerned that the upcoming review will follow the pattern of earlier reviews that failed to even mention the most likely options and dismissed other available and feasible options in a peremptory and unsupported fashion.

Deployment of CCS

Pursuant to the CAP, U.S. agencies may not support new coal-fired plants that do not deploy CCS technology unless the project meets each of the three criteria discussed above. There has been no discussion of the deployment CCS technology.

Conclusion

The Kosovo C project will certainly fail two of the three tests required under the Presidents CAP. It is also extremely likely that a USC PC boiler with an FGD (or an IGCC) and lignite drying

⁷ <http://rael.berkeley.edu/kosovoenergy>

will not be proposed as the technology to employed. Unless this technology is proposed the project will also fail to satisfy the third requirement of the CAP. USAID has had access to the tender documents for the proposed plant and knows the minimum efficiency requirements specified. At some point, this information will become public knowledge and USAID's credibility on this point can be better evaluated. At the very least it is clear that USAID's evaluation of Kosovo's status as one of the world's poorest countries is incorrect. It should be even more clear when bids are made publicly available that US Agencies cannot support this project under the CAP.

Executive Branch agencies, such as US Treasury and USAID work for the President. Those agencies were consulted in the process of developing the CAP and were involved in developing the specific language of the limitations in the CAP. If the President issues a directive that sets out U.S. policy, those agencies should work to implement the President's directive as issued, rather than working to maneuver around restrictions in the CAP. Relaxing the very specific limitations of the CAP so that the next coal plants in the queue can obtain U.S. support for funding seriously undercuts the effectiveness of the CAP and undermines the President's credibility on these issues. US Treasury and the other agencies involved in this process should publicly withdraw support for this project at an early stage to avoid wasting valuable time and resources on the part of prospective bidders and others.