The development of Mongolia’s energy sector: Going beyond coal

Mongolia’s fragile economic situation, with its high deficit and increasing foreign debt, is putting the country on a risk map for foreign investment. Even so, the government and international financial institutions show no sign of adjusting their plans so that the country could move to a more sustainable path of development. The dominance of coal in the Mongolian energy sector strategy and plans for new power facilities in Ulaanbaatar rest on myths about coal, rather than robust feasibility studies, impact assessments and an analysis of alternative scenarios. Furthermore, the country’s ageing power plants and the transmission and distribution networks have lead to a highly inefficient energy sector.

In this context the strategic investment direction of the EBRD does not seem to balance the urgent need for modernisation of the country’s energy infrastructure with the massive financial, human and environmental risks that Mongolia faces in continuing with carbon-intensive and commodities-based development. At the same time, civil society groups in the country increasingly demand that human rights are respected and the high environmental price of the commodities-based development model is properly accounted for.

The priorities outlined in the 2015 Mongolian energy policy are also disconnected from the international commitments on limiting climate change to 1.5 degrees Celsius and market warnings about stranded carbon assets, and it fails to tap the opportunity of utilising the country’s considerable potential for renewables. The policy prioritises a number of coal-based power plants across the country, which are justified by myths about the reliability and affordability of coal-based energy. Mongolia’s ambitions to export energy and its drive to expand mining. Currently the government is planning more than six new coal power plantsover the next decade, including a combined heat and power plant (CHPS) in the capital and a coal power plant in the South Gobi region.
Although it is imperative that Mongolia secure reliable heating and power supplies, the EBRD’s investment decisions should, first of all, aim to benefit the people of Mongolia, rather than mining companies. Moreover, the EBRD should promote innovative, efficient and resilient solutions, rather than the continued dependence on coal and the export of commodities. The inefficiency of the energy system as well as the alarming situation with air quality means that the EBRD should gear its policy dialogue, technical assistance and investments in Mongolia towards the decentralised development of solar and wind energy, and demand-side energy efficiency measures.

A false solution to pollution and energy poverty

CHPs in Ulaanbaatar is presented by the government as a solution to the air quality situation in the capital and a way out of energy poverty in a city that faces massive rural to urban migration. However, the 2015 ESIA for the project fails to demonstrate how these objectives will be met.

CHP5 is planned to have 463.5 MW of installed electricity capacity, or a combined 426 MW gross of electricity and 587 MW of thermal energy installed capacity, using subcritical coal technology which will only worsen the air quality in Ulaanbaatar. With low efficiency rates, the power plant is not in line with the standards of the OECD’s Sector Understanding on export credits for coal-fired electricity generation projects, agreed in November 20151.

Among its most problematic aspects, the construction of CHP 5 is not tied to the closure of any of the existing CHPs in the capital, which already account for over 50 per cent of SO2 and NO2 emissions in the city2. Of great concern is the fact that the majority of urban poor in Ulaanbaatar are living in ger districts where houses are not connected to public utilities, especially heating. Therefore the additional heating from CHP5 would not benefit this part of the population. The residents of the ger districts are reliant on burning coal and waste during the winter months, which is another major source of pollution in Ulaanbaatar.

A recent national policy on curbing air pollution, adopted by the government in March 2017, aims to reduce the current levels of air pollution by 80 per cent by 2025. While the policy is national, the focus remains in Ulaanbataar, where the coal burning in the ger district is responsible for 60 per cent of the city’s air pollution, according to the Metropolitan Air Pollution department.

It is difficult to see how CHP5 will positively contribute to the most pressing needs of the people in Ulaanbaatar, whether access to public utilities by the poor or improving the air quality for all residents. Ulaanbaatar requires sustainable solutions that integrate smart urban planning for the ger districts, including green energy solutions with drastic measures for improving air quality, mini-grids that would ensure electricity from non-polluting sources in these parts of the city and demand-side energy efficiency.

The push of mining companies

The projected power demands for phase two of the EBRD–financed Oyu Tolgoi mine, which includes the development of an underground mine, is central to the push for the 600 MW Tavan Tolgoi power plant.3

While Oyu Tolgoi LLC is responsible for assessing alternatives for its power supply, including the options for building a coal power plant at its site or purchasing electricity from a future power plant at

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3 Oyu Tolgoi ESIA, 2016, http://ot.mn/media/ot/content/reports/Environment/emp/Amendment_DEIA_on_OT-mining_and_processing-2016_eng.pdf
Tavan Tolgoi, the latter option is already moving forward procedurally. No information is publicly available about the assessments being prepared by Oyu Tolgoi LLC for its power supply options, and according to the EBRD, no option has been chosen so far. However during an August 2016 meeting in Ulaanbaatar, a company representative expressed the full support of Oyu Tolgoi LLC to the Mongolian government for the development of a power plant at Tavan Tolgoi. The decision seems to be rooted in political and economic interests, rather than an actual assessment of the feasible options. The Mongolian Ministry of Energy argues as well that the power plant is crucial for OT phase 2.

Oyu Tolgoi LLC argues that its choice for a coal power plant is based on an outdated power alternative analysis conducted in 2011 during the development of the environmental and social impact assessment for the mine. In this analysis, the coal power supply option was assessed as the most reliable option, due to the projected power needs and the nature of the underground mining activities.

Meanwhile a number of renewable energy projects have come online in the Gobi since the analysis was conducted, including a 50 MW wind farm close to Tsogttsetsii, which received financing from the EBRD. The latest 2016 ESIA made available by Oyu Tolgoi does not bring any new analysis of power needs or alternatives for phase 2.

The future power supply for the Oyu Tolgoi mine is a central issue to the mine’s development and impacts on the surrounding environment. Given the unresolved conflicts related to the biodiversity and water impacts of the Oyu Tolgoi project, Oyu Tolgoi LLC and its investors should not develop further associated facilities such as the Tavan Tolgoi power plant. Instead, the EBRD should require that Oyu Tolgoi LLC develop a cumulative impact assessment and a comprehensive analysis of alternative power supply options, including a number of the proposed renewable energy projects in the South Gobi region.

A country at crossroads

The two cases presented above are stark examples of the poor planning of the government with regards to the development of its energy sector. Mongolia is at a crossroad. Its energy system is old and inefficient and projects put forward by the government, some of which have been supported by the EBRD, should reflect the need for a diversified energy mix and as well a curbing of air pollution, especially in the capital, Investments in renewables and smart grid solutions for rural areas and where the population is scattered and for condensed ger districts in Ulaanbaatar is much needed.

The new EBRD country strategy for Mongolia should reflect these needs by:

- clearly stating that the EBRD will not support directly or indirectly through connected facilities, the development of coal power plants or coal mines in the country, including heat and power plants in the capital;
- including clear targets for investments in renewables in Mongolia, smart grid and decentralised networks, and in demand-side energy efficiency projects.