

MONGOLIA'S ENERGY SECTOR

Time for a rethink

CEE

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network

APRIL 2017

Author

Ana-Maria Seman, CEE Bankwatch Network

Acknowledgements

Pippa Gallop, CEE Bankwatch Network

Yuki Tanabe, JACSES

Sukhgerel Dugersuren, OT Watch

This publication has been produced with the financial assistance of the European Union. The content of this publication is the sole responsibility of CEE Bankwatch Network and can under no circumstances be regarded as reflecting the position of the European Union.



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EXECUTIVE SUMMARY

Between 2010 and 2012, Mongolia was the world's fastest growing economy as a result of massive mining investments, most notably the Oyu Tolgoi mine. However, its reputation as a hotspot for investors is now in decline as a result of political dynamics and unstable commodity prices. Instead, the country is gaining a new reputation, that of a zone of struggle in which civil society is trying to ensure that the environmental price of development is not too high and that people's rights are respected. More struggles await ahead as plans for developing the energy sector are heavy on coal power plants with renewable energy being given a low priority. Transparency as well as participation of the public in decision-making are very much lacking in infrastructure and energy projects.

The priorities of the power sector in Mongolia are disconnected from international commitments on limiting climate change to 1.5 degree Celsius, as well as from local realities by breaching basic participation principles, the right to a safe living environment and most importantly the right to clean water and air. A front row seat is reserved for coal based power plants planned across the country, backed by myths around the reliability and affordability of coal based energy. At the same time, the brief economic boom that the country experienced between 2010 and 2012 from the commodities market, growth that came along with a rise in demand for power and in the number of people moving to urban areas, is something that the government expects to return and back the infrastructure and energy

plans of the government. However, it is not only the government but also international financiers, including International Financial Institutions (IFIs) and export credit agencies (ECAs), that need to take a share of the responsibility for making sure Mongolia provides for its people and lives up to its international commitments.

Mongolia plans to build over the next ten years no less than six new coal power plants, including a new plant in its capital city where air quality is below any acceptable limits, and one in the South Gobi region aimed at supplying the Oyu Tolgoi mine. These plans are first and foremost an issue of poor assessment of the costs of such projects as well as of the changing reality of demand in the country and of potential for renewables. A realistic assessment of demand and supply capacity is urgently needed, as investments have been stagnating in the country in the past few years and the economy has slowed dramatically. Demands for electricity might be met through investments in energy efficiency and RES, though attention will need to be given to meeting heating

requirements in areas currently served by combined heat and power plants.

The lack of accurate judgement on the health, environmental and economic costs of coal plants trickles down to the level of local communities that have a poor understanding of the impact of coal plants on health and water foremost and of the non-coal options that exist. This situation is perpetuated by poor consultations with civil society and locals on energy and infrastructure policies, for which no Strategic Environmental Assessments exist.

Political will combined with major interests from industry, including the coal industry in Mongolia and abroad, seem to be driving priority projects, a situation that requires civil society groups to engage in challenging the current rhetoric around coal-based energy as well as the loose approach of some financiers that see Mongolia as an exception to their existing commitments on not financing new coal capacities.

Civil society groups need to further

engage with national decision-makers and demand that the current energy and infrastructure policies are backed by strategic environmental assessments and by up to date energy demand projections that are based on realistic growth forecasts and take into consideration the volatility of a commodity-based economy as Mongolia's. Further research and alternative analysis done jointly with civil society is especially needed for the capital Ulaanbaatar where air quality is degrading due to the three thermal plants operating in the city and the burning of coal by households, while a large number of people are in need of sustainable heating solutions during the harsh winters.

On the other side, international financial institutions should adopt a coherent position with regards to not supporting new coal capacities in the country or any connected facilities. IFIs can on the other hand leverage opportunities for improving energy efficiency in the country and seek ways to sustainably rehabilitate the existing capacities in the country, especially in the capital city, avoiding the option of adding extra coal capacities.

INTRODUCTION

A country at a crossroads

Also known as the “Saudi Arabia of Central Asia”, Mongolia is rich in gold, silver, copper and coal reserves. But the heavy foreign investments into mining have not put the country on a path towards sustainable development, especially for the nomad population of Mongolia that is reliant on pasture land and groundwater. Instead it has brought increasing dependence of the country’s economy on volatile commodity markets and foreign investments, and existential threats to one of the last nomad populations from the South Gobi desert as a result of the degradation of pasture land and huge losses to the biodiversity¹ in the same region. It is no wonder that there are currently a number of complaints

ongoing at European Bank for Reconstruction and Development and International Financial Corporation accountability mechanisms over the impacts of the Oyu Tolgoi mine, the largest gold and copper mine in the country, situated in the South Gobi desert.²

The plans of the government to increase power supply in the country to meet demand projections from mining activities may also fail in sustainably addressing the need to reform the energy sector to benefit the people and reduce environmental impact. Numerous plans and bids for investments in new coal power plants have been put forward in the past 10 years in Mongolia. These plans have not been covered by any

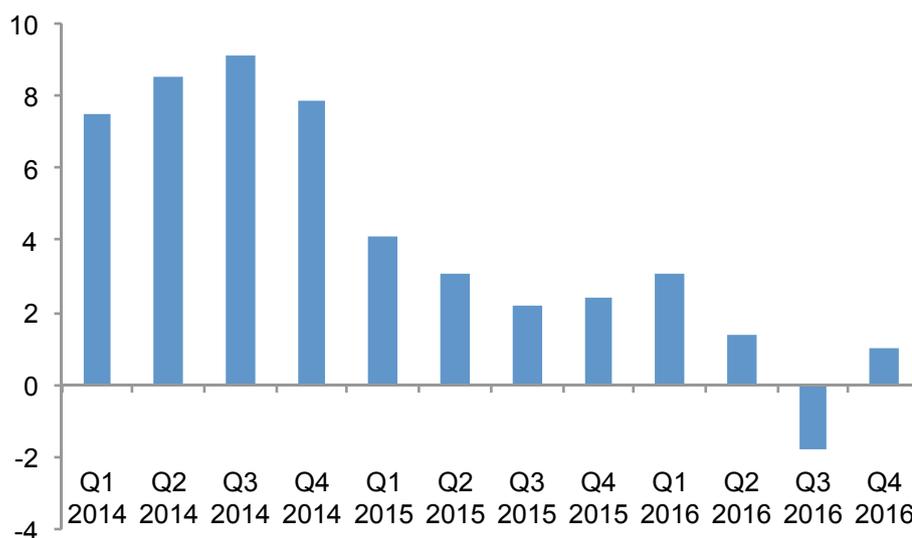
strategic environmental impact assessment including assessment of impact on water, a scarce resource for the country, nor have there been consultations with the population over the best alternatives for the future of the energy sector. A recent study³ from the 2030 Water Resource Group Mongolia partnership, a public-private-expert-civil society group aimed at supporting the government for developing a sustainable water management plan, has concluded that if all mining plans move ahead until 2040, there will be massive water supply demand gaps that can reach 34 per cent [34.25 mn m³/y] in the Nyalga Shivee Ovoo region and 60 per cent [18.85 mn m³/y] in the Tavan Tolgoi region, regions where two of the largest coal power plants are planned.

As two thirds of Mongolia consists of arid land, most of the new energy production plans of the government as well as mining operations are to be developed where water is most scarce. It is especially the case in the South Gobi Region [SGR], the site of the largest mining operation in Mongolia at the Oyu Tolgoi copper and gold mine. The largest coal deposit in the world, Tavan Tolgoi, is also located in the SGR. However, plans for its exploration have been repeatedly stalled. This region is also the proposed site of a 600 MW subcritical power plant, the Tavan Tolgoi power plant, that is to supply

electricity to three mines in the region, including the Oyu Tolgoi mine.

On the other side of the map, the capital Ulaanbaatar has seen massive urbanisation in recent years and along with it, increased pollution and degradation of protected areas surrounding the city. But Ulaanbaatar is now among the most polluted capital cities in the world mostly due to the presence of 3 aged coal power plants and the use of coal for heating by the majority living in gers.⁴ Even so, the government plans a 463 MW plant just 20 km away. The Combined Heat and Power Plant number 5 has seen a number of investors piling up in recent years including the Asian Development Bank, Nippon Export and Investment Insurance [NEXI] as well as POSCO of South Korea and Engie of France. The ADB's private sector arm has already committed to a USD 150 million loan⁵ for the project while its office in Ulaanbaatar is providing technical expertise to the Government of Mongolia in their negotiations with the international consortium financing CHP5.⁶

When it comes to new investments in Mongolia, especially in industrial sectors, the economic situation of the country, namely its immense deficit and indebtedness, is the elephant in the room. As highlighted in a recent Bankwatch report⁷, the rapid growth that Mongolia experienced up until



Annual Change in GDP¹² National Statistics Office of Mongolia

2012 was short-lived and did not put the country on the path of lasting progress but on that of vulnerable commodity markets. Currently, Mongolia has a deficit of up to 20 per cent of its GDP⁸ and GDP growth has dropped from 17.5 per cent in 2011 to between 2 and 3 per cent in 2015.⁹ Only in 2016, the nation's budget deficit has doubled to USD 1 billion while the GDP contracted by 1.6 per cent in the first 9 months of the year.¹⁰ With regards to foreign debt, Mongolia has now the second highest external debt to GDP ratio in the world at 129.8 per cent, totaling around USD 22 billion.¹¹

All the aforementioned dynamics in the country, from the impacts of mining on the environment and the constant threat of projects to water and pasture land, to the economic instabilities that accompany the shaky political situation with a high turnover and changing agendas, constitute a perfect mix for failed projects. The fossil-fuels-based energy priority plans of the government bear immense risks of increased environmental and health costs and are a missed opportunity for the country to improve its economic situation by investing in energy savings and renewables projects with no hidden costs for the population.

As shown in the next chapters, the government fails to properly assess the costs of coal power projects versus the potential for sustainable energy in the country and to involve the population in decision-making. Mining companies and international investors are seizing the moment and committing to support a number of coal power plants in Mongolia, either through financial and technical support or through power purchase agreements. As one of the few countries that International Financial Institutions are still treating as an exception in their no-coal policies, Mongolia is the perfect place for exporting surplus coal technologies from its neighbours such as China. Therefore, it is not only up to the Mongolian government but to the entire international community of investors to assess new potentials and take urgent commitments towards a future beyond coal for Mongolia.

Objective and methodology

This paper aims to constitute a background document for civil society in Mongolia and international groups to advocate for:

- increased transparency and participation in priority energy projects;

- improved forecasts of power demand and alternatives for the sustainable development of the energy sector to benefit people and the environment and meet Mongolia's commitments towards climate change mitigation;
- an increased share of renewable energy in the Mongolian energy mix along with removing fiscal and financial barriers for renewable projects;

The methodology used to collect information for this report consists of both qualitative and quantitative research tools. The qualitative tools include preliminary desk research conducted in June and July 2016 into the Mongolian energy sector. The desk research also informed a field visit to Mongolia that took place between 21st and 30th August 2016. Other qualitative research instruments include semi-structured interviews with representatives of relevant Mongolian ministries, associations, local authorities, representatives of international financial institutions as well as representatives of mining companies.¹³ Quantitative research methods used include two surveys conducted during the August field visit with community members from the cities of Khanbogd and Tsogttsetsii in Mongolia.

The research methodology of

the report is based on qualitative research methods and includes desk research and field investigations, both conducted between June and February 2017. The desk research was conducted by CEE Bankwatch Network and included:

- Online research on the Mongolian energy sector: supply, demand, investments;
- Requests for information sent to International Financial Institutions including the IFC, the ADB and the EBRD; and to the Mongolian Ministry of Energy;

The field investigation complemented the desk research by gathering information through meetings with key stakeholders, surveys with local communities as well as observations from site visits. The field investigation took place between 21 August and 30 August and was organised by CEE Bankwatch Network with the support of OT Watch. Partners from the Forum on ADB and JACSES (the Japanese Centre for a Sustainable Environment and Society) also participated in the investigation.

The field visit included a number of meetings with key stakeholders during which semi-structured interviews were held, most notably: two meetings with line ministries (Ministry of Environment and Ministry of Energy), two meetings

with International Financial Institutions (IFC and ADB), two meetings with the business sector (including Oyu Tolgoi LLC and General Electric), meetings with local authorities from the South Gobi desert (one in Tsogttsetsii, one in Dalanzadgad and one in Khanbog), and one meeting with representatives from the renewables sector.

Two surveys were also conducted during a visit in the south Gobi desert and were aimed at mapping the level of awareness and understanding of local communities on coal power plant projects in the region. Also, the participants visited the sites of the planned Tavan Tolgoi power plant, the CHP5 project and the site of the Salkhit wind farm, the first wind farm in the country.

A NEW GOVERNMENT WITH AN OLD STRATEGY

Last year's parliamentary elections in Mongolia brought back to power the People's Party, also known as the Communist Party, a faction that was away from power in the past 4 years and made a comeback promising that it would put the country back on the investment track that brought its economic boom between 2010 and 2012. But the legacy of massive foreign debt and deficit that the country accumulated in the past few years might not be easily solved with more investments in commodities as metal prices are low and the environmental and social costs of mining projects that have piled up raise serious questions over the path that the country should be taking to bring adequate living standards to its people in a sustainable manner.

As well as the mining sector, the main sector has contributed to the economy after subsistence agriculture. The development of the energy sector has been at the top of the agenda for many recent governments. This includes the construction of new power units as well as investments in renewables and transmission lines. Construction plans and investment agreements have been floating around for at least six new coal power plants and numerous new transmission lines around the country during the rule of the past two governments. While renewable energy projects and solutions have occupied an important seat at the table, the latest energy policy adopted by the Mongolian government in 2015 for the next 15 years, is a step back from tackling global climate change

and realising the RES potential for the country.

This policy is a continuation of the country's energy strategy based on the goal of satisfying continuously growing demand. The policy sees a need to fill existing gaps in baseload needs and acknowledges the low reserve margin of electricity generation capacity, the aged condition of both power plants, transmission lines, and the low tariffs. However, the potential for renewable energy solutions is only mentioned in the background analysis of the opportunities and motivation for developing the sector.

Although there are clear targets for renewable energy which should be achieved in two stages up until 2030, the overarching strategic vision of cutting down electricity imports to zero and ensuring reliability of supply are translating in practice into plans for more coal power plants and hydropower plants.

One step forward, two steps back

Based on the energy policy from 2015, the priorities and objectives set for the Mongolian energy sector are separated into two phases of implementation, one from 2015 to 2023 and one from 2023 to 2030. These stages correspond to two main strategic goals: A.) building a reliable and secure energy system by

doubling the installed capacity using supercritical technology and ensuring 10 per cent of installed capacity from hydropower plants as a base for more renewables and B.) exporting electricity and developing further renewables up to 30 per cent of total installed capacity.

While plans for developing renewable energy solutions are only detailed in per centages for the two stages of implementing the energy policy, the plans for developing new coal heat and power capacity are more detailed and, some would say, overly ambitious. In the first phase from 2015 to 2023, the government aims to have completed the construction of six coal power plants around the country, doubling the installed capacity, and two hydropower plants for achieving an initial 10 per cent target of renewables. In the meantime, there is no information about plans to close any of the aged coal power plants in the country.

The coal power plants planned to be constructed until 2023 include the Tavan Tolgoi thermal power plant (TT), the Baganuur thermal power plant, the Combined heat and power plant number 5 (CHP5) in Ulaanbaatar, a thermal power plant in western Mongolia, a thermal power plant for electricity export (Shivee Ovoo), and a thermal power plant in the eastern region of Dornod. If these plans are

completed, a total capacity of 1950 MW for internal use should be added to the grid and 9240 MW from Shivee Ovoo will be exported.

Besides the six power plants present in the 2023 strategy, there are three more projects at different stages of approval including the Chandgana Coal Project east of the capital, the Tevshiin Gobi power station, and a 100 MW expansion for Ulaanbaatar power plant number 4, adding up to another 1300 MW.

Although the energy policy does not mention the planned capacity for the coal power plants but only the aim of doubling installed capacity, information from desk research and from Bankwatch's field visit in Mongolia shows that the government plans an extra 12 GW of installed electricity generation capacity to be constructed over the next few years, out of which 9 GW¹⁸ of power from the planned Shivee Ovoo coal power plant would be exported to China. The 12 GW is far from the aim of doubling current capacity estimated at 1100 MW, showing the unclarity and lack of consistency between governmental policies and practice.

The economic downturn in Mongolia as well as the difficulty in securing investments might leave plans unfinished. Even so, the government

and a number of interested stakeholders, such as mining companies, are pushing for plans to materialise the Tavan Tolgoi power plant that would supply Oyu Tolgoi mine and for the Asian Development Bank's CHP5 project in Ulaanbaatar. The Tavan Tolgoi power plant is considered to be critical for securing power for the second phase of the Oyu Tolgoi mine development, and CHP5 is considered essential to meeting increasing demand in the capital city.

Such ambitious plans for the construction of coal power plants overshadow Mongolia's targets for renewable energy of 20 per cent until 2023. In addition, plans to cover 10 per cent of the RES target with electricity generated by two future hydropower plants are of great concern given the limited water sources in the country and the impacts of hydropower plants on biodiversity. Development of other renewable energy projects, including solar and wind, should not be postponed until the second phase starting in 2023, but alternatives for integrating more wind and solar in the system should be sought.

Mongolia has a low historical responsibility concerning climate change as well as a harsh climate and high ambitions to further develop its economy based on mineral extraction and processing. For these reasons, in

Name & number of units	Location	Capacity	Investor/Contractor/Financier	Status	Cost
Shivee-Ovoo power station	Shivee Ovoo mine in Govisumber	9240 MW ¹⁴	State Grid Corporation of China. JICA also provided a loan for the expansion of the mine in 1997 ¹⁵	Announced - no construction work started	USD 4 billion
Chandgana Coal Project - 4 units	Khentii	600 MW	Prophecy Coal Corporation from Canada	Permitted	USD 160.2 million ¹⁶
Baganuur IGCC	Tov	700 MW	POSCO/MCS	Unknown	USD 3.5 billion
Tavan Tolgoi - 4 units	Omnogovi	600 MW	Marubeni - Japan	Permitted	USD 500 million
Tevshiin Gobi power station	Dondgobi	600 MW	Mogul Power, SEPCOIII	Permitted	Approx USD 1 billion ¹⁷
Telmen Thermal Power Plant unit 1&2	Zavkhan	100 MW	Yuanda Group, New Asia Mining Group	Construction	USD 183 million
Ulaanbaatar Power Plant unit 4 [expansion]	Ulaanbaatar	100 MW	Thermal Power Plant-4 SSH Co.	Construction	N/A
Ulaanbaatar Power Plant unit 5 [CHP5]	Ulaanbaatar	450 MW	ADB private sector arm		
Engie/Sojitz/Posco/Newcom	Pre-permit	USD 1.3 billion			
Dornod power plant expansion	Dornod province	100 MW	KfW	On hold	MNG 312 billion

the Mongolian Nationally Determined Contributions submitted in readiness for the 2015 Paris Agreement, the government has not committed to net greenhouse gas reductions but rather plans to increase them from 21.9 Mt CO₂ -eq in 2010 to 51.2 Mt CO₂ -eq in 2030. In the same time, projected emissions coming from the energy sectors are expected to increase from 63.9 per cent of total emissions in 2010 to 83.5 per cent of total emissions in 2030, translating to a 305 per cent increase in CO₂ emissions from the energy sector. Given that the sum of all the INDCs would allow the possibility of limiting temperature increase only by 2.7 degrees Celsius by 2100 rather than the agreed on 1.5 degrees, it will be necessary to revisit these commitments in the near future.

The myths of coal

According to information gathered during meetings with government officials and international actors in Ulaanbaatar, the Mongolian government's determination to develop its power supply based on coal is rooted in the belief that coal is the only reliable source for ensuring security of supply and in the motivation to further pursue a commodity-based economy and take advantage of the country's immense coal resources. Both arguments are based on a model of development that is being phased

out by many Western countries and that has proved to bring higher costs for people and the environment, often leaving the most vulnerable aside.

In this case Mongolia, baring in mind its specificities due to harsh winters when reliable heating is needed, acknowledges that coal cannot be phased out over night. However, friendlier alternatives to building new massive coal capacities can be sought, such as rehabilitation of old plants and household refurbishment. In either case, energy plans should properly assess health and environmental risks and seek to serve the population in need, not the unstable mining industry.

The two arguments of reliability and availability of coal in Mongolia are combined in the belief that investing in coal power plants is also the cheapest option for the country. With current low energy tariffs and a state-regulated environment, the energy sector operated with a MNT 68 billion¹⁹ [approx. EUR 30 million] loss in 2014. Although the energy policy does include measures for making the sector more competitive, this is a long term process and the government needs to carefully consider investment risks such as the need to continue granting subsidies for electricity generated from new plants.

Furthermore, coal is considered cheap because power plants are not covering

the full environmental and social costs of coal burning such as impact on human health, water pollution, degradation of ecosystems.²⁰ A Harvard University study²¹ has revealed that these costs, known as “externalities”, would double or triple the price of electricity from coal if they were reflected in the electricity bill, making renewables much cheaper.

A number of people interviewed by Bankwatch living in areas close to the future Tavan Tolgoi power plant declared that a future power plant is an option but it has to be constructed with the best technology so that there is no environmental impact. Since coal plants always have significant environmental impacts, this shows that there is a low level of understanding and awareness among people on the impacts of coal power plants and on the technologies and alternatives available.

The Mongolian government seems - at least on paper - determined to bring more modern technology to the country. In its National Determined Contributions [NDC]²² submitted to the UNFCCC, one of the main priorities for the energy sector is to implement more advanced technology in energy production such as supercritical pressure coal combustion technology by 2030. However, the Tavan Tolgoi power plant, as explained below,

is foreseen to be subcritical. In addition, supercritical plants can no longer be said to represent the latest technology as ultra supercritical plants are more efficient.

Importantly enough, power plants with a dry-cooling system - a relatively new type of cooling system developed for thermal power plants operating in arid areas in some countries - are characterised by increased inefficiency due to the need to use extra energy for cooling and also because of their vulnerability to hot temperatures. Power plants with dry-cooling still use a significant amount of fresh water for scrubbing of air pollutants, which amounts to 20-25 per cent of the typical amount of water demand of re-circulating wet cooling. A 500 MW, supercritical coal-fired power plant with dry cooling would withdraw around 2 million m³ and consumes 1.7 million m³ of water per year.²³ From the documentation available so far, it appears that the Tavan Tolgoi power plant would include a dry-cooling system. Also, in its replies to CEE Bankwatch Network, the European Bank for Reconstruction and Development [EBRD]²⁴ has stated that the TT plant would include a number of smaller units and a dry-cooling system in order to provide flexibility in generating capacity and in order to minimise the amount of water required for cooling.

The assumption that the country

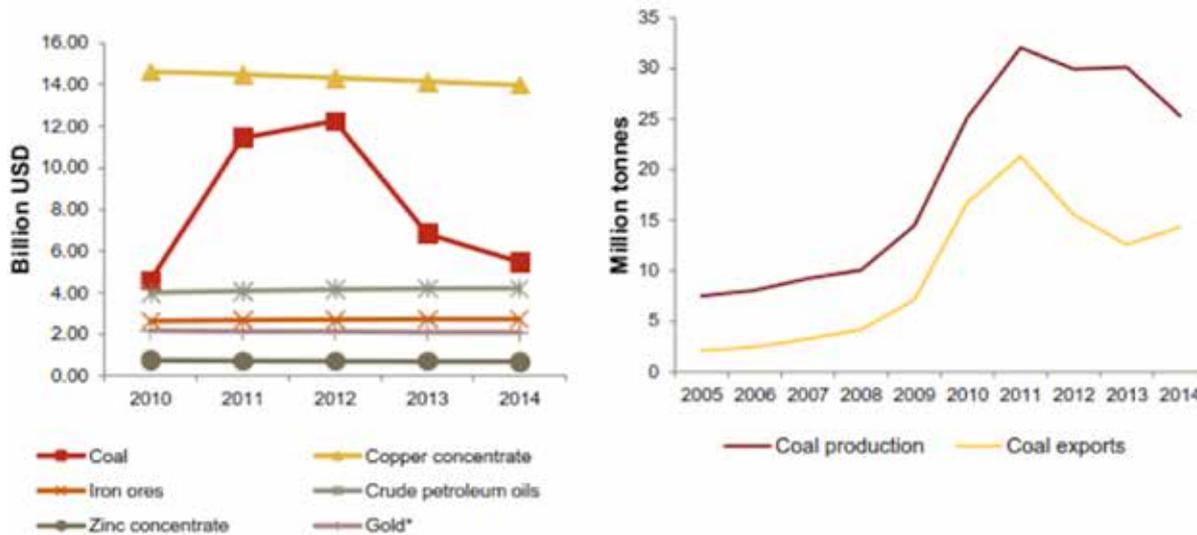


Figure 3: Coal production and exports in Mongolia, *Prioritised Solutions to close the water gap, 2030 Water Resource Group Mongolia partnership*

should be used to fuel future power plants if it has a coal supply, is also incorrect. The Southern Gobi Desert has already been severely affected by the mining activities of both metal and coal companies exploiting the Tavan Tolgoi coal deposit. Currently, coal mining companies are operating open-cast mines with visible impacts to the environment and the people. The people living in proximity of the Tavan Tolgoi coal deposit have been severely affected over the past years by the dust spread from the mines by killing many of their livestock and by the destruction of pasture land by thousands of coal trucks that are crossing through pasture land on their way to China.²⁵ The main mining regions where the Tavan Tolgoi coal deposit and the Shivee Ovoo coal deposits are located are lacking the necessary infrastructure to increase coal exploration capacity. This includes lack of processing facilities, coal washing facilities, as well as road and rail infrastructure for transportation. Increasing coal exploration at these two main deposits needs to be thoroughly assessed given that demand has been dropping in the past couple of years due to price volatility of coal, poor infrastructure, and lack of revenues from mining companies

as well as increased competition from Australia, Indonesia and South Africa.

The newly elected government in Mongolia seems to be blinded by the desire to secure power and legitimacy in the eyes of the people when promising a new investment boom in the country. The failure to properly assess the implications of the current energy policy and to prove the benefit to those in need bears immense risks for the environment and the health of the people as well as for the sustainability of investments. As shown in the next section, a realistic analysis is needed of the demands for electricity of the household and industry, analysis based on the most recent trends in the main economic sectors, namely mining. Such an analysis should be met by options for meeting projected demands including renewable energy sources and modernisation of the current capacities and of transmission infrastructure. However, as shown in the next section, international investors also play a critical role in the coal rhetoric as financial institutions. The mining companies and government wishing to export coal technology can be found behind the push for coal power plant projects in a country with an immense renewable energy potential.

WHAT IS DRIVING DEMAND?

This section will analyse the different perspectives on the demand for electricity in Mongolia and the options laid down by the government and international donors for the development of the sector, aiming to show the lack of up to date analysis and data to back the existing policies and pipeline of projects, many of which are supported by international investors.

As mentioned above, the projected increased demand from the mining sector and urbanisation, the desire to eliminate electricity imports from Russia and China, and the reliability of coal-based energy for the country's development plans, are the main arguments for the Mongolian government to push coal-based power plants. While many might believe

that the last two are debatable and that the first one is grounded in the development boom of the country between 2010 and 2012, a close analysis into the projected demand shows that the numbers are not only based on a high growth rate, but that the plans of the government exceed them by far. To further analyse these projections, the section will provide an overview of the current state of the power sector and related infrastructure in Mongolia and the double standards of the government and international actors towards investments in this sector.

Major gaps in the system

The current energy mix in Mongolia is very coal-intensive with eight thermal

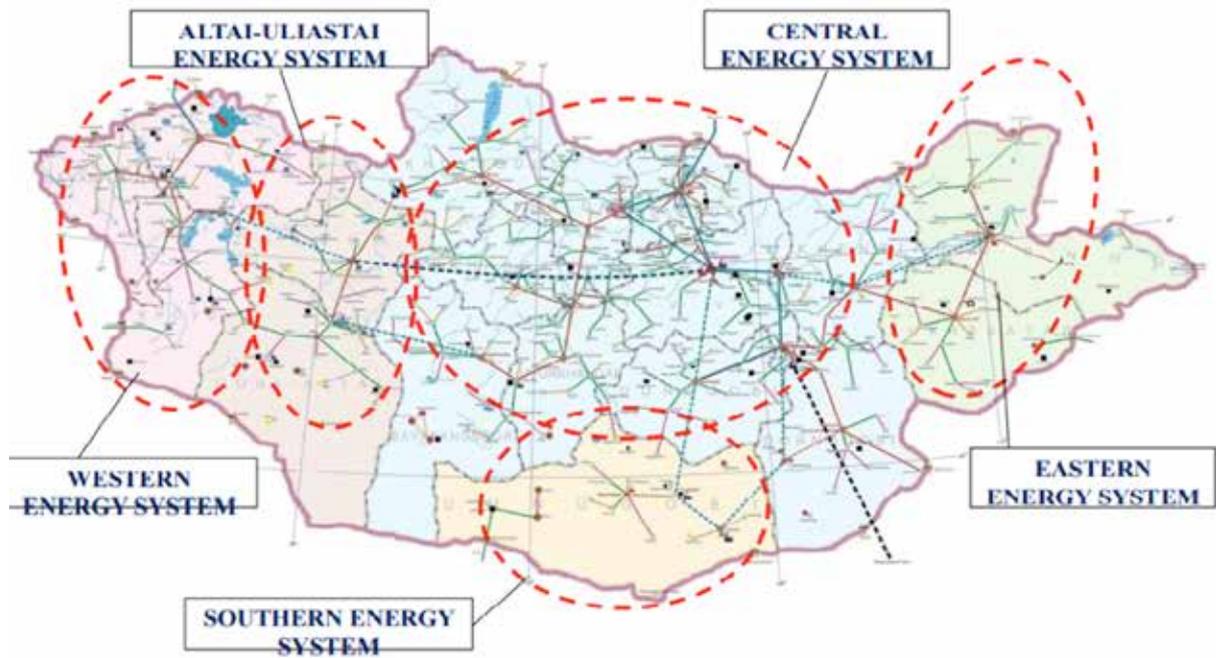
power plants of old technology making up 90 per cent of the country's installed capacity of 1122 MW and supplying 79.3 per cent of its electricity.²⁶ The majority of the power plants are operating in the central region of the country where the power grid has most interconnectors supplying rural areas. More striking is that the capital Ulaanbaatar has 3 subcritical power plants running inside the city with a total installed capacity of 710 MW, the largest one being the Combined Heat and Power Plant no 4 with a capacity of 540 MW (3 x 80 MW, 3 x 110 MW).²⁷ Therefore, the Central Energy System, which includes Ulaanbaatar, represents approximately 80 per cent of the total electricity generation of Mongolia.

The electricity system, including the Central Energy System (CES), the Western Energy System (WES), the Altai-Uliastai Energy System (AUES), and the Eastern Energy System (EES) is characterised by aged infrastructure and major losses along the transmission lines and poor interconnectedness as the 3 major systems (central, western and eastern) are unconnected, making the western region reliant on imports from Russia. Besides the eight thermal power plants, there are two hydropower plants and one wind power plant that has been recently developed with support from the EBRD and connected to the CES. At the rural level, given the nomadic culture of Mongolia, gers ensure their supply

mostly through small solar panels and diesel generators. However, both rural gers and the cities ger districts use coal intensively in winter time for heating. This is one of the main sources of pollution in the larger urban areas. As for the numerous mines around the country, besides the Oyu Tolgoi mine that is purchasing power from Inner Mongolia, the majority of the smaller mines are either connected to the grid, they have their own small power plant (such as Energy Resources from the Tavan Tolgoi coal deposit) or have diesel generators.

In 2013, Mongolia experienced losses of approximately 15 per cent in transmission and distribution, far from the international best practice of 5 per cent.²⁸ Besides the losses on the grid, the high internal consumption of electricity by the power stations themselves adds to losses of nearly 30 per cent of the total generation, making around 800 MW available from the total amount produced.

Besides the shortcomings on the distribution and production side, the regulation in the energy sector is often a barrier to its improvement. The electricity market in Mongolia is state-dominated and tariffs for coal based electricity are kept at a low level. Therefore, income is low, making little financial resources available for maintenance and investments.



Mongolia Integrated Power System

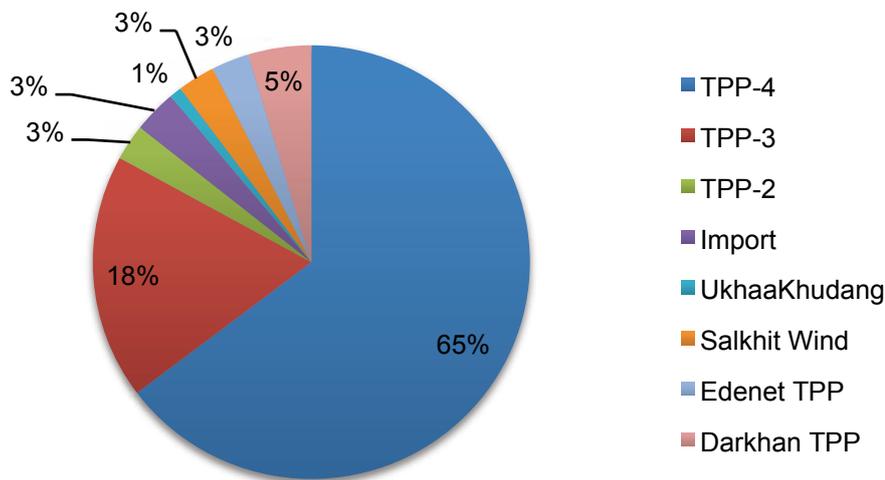
It should be clear by now that the power supply system has several vulnerabilities that ought to be tackled before investing in more capacity. The existing coal power plants are aging and have major losses along the power lines. Second, the power grid is not properly connected between the central, eastern, and, especially, western grid. However, the highest demand for heat and power in Mongolia is in the CES as the population is scarce outside the capital and the major operational mines in the country are connected directly or through the southern and eastern systems to the CES. The only exception is the Oyu Tolgoi mine. Tolgoi mine.

Mongolian electricity imports make up around 20 per cent²⁹ of its power supply. While the southern region is mostly the mining sector, namely the Oyu Tolgoi mine that imports electricity from China, the western region is dependent on electricity from Russia. Maximum import from Russia is limited to 100 MW, although night peak during winter can be increased to 180 MW.³⁰ This creates several problems for the government, including major

financial losses, as during night time the system has to sell power back to Russia at much lower prices than the purchase tariffs at peak hours.

Looking over the energy priorities for the government presented in the previous chapter, there is a lack of concrete measures to tackle the situation in the western region, while projects seem to be addressing more the needs of the mining sector in the south and of projected increased urbanisation and industrialisation of the capital city. In the western region, one coal power plant is in the pipeline, the Telmin TPP, with a capacity of 100 MW, but it does not represent one of the priority plants for the government's energy policy. At the same time, there are five planned plants in the CES - three being given high priority to be completed by 2023, and one also of high priority in the South Gobi region.

Therefore, by going ahead with its current energy policy priorities, the government will not address the issue of imports from Russia in the Western region but it will add more capacity to the CES, especially around Ulaanbaatar. Moreover, the planned



Mix of power sources in the Central Energy System (CES)

power plant in the South Gobi Region, the Tavan Tolgoi power plant, is designed to serve three major mines in the region while the Shivee Owoo plant is intended for export to China even though no preliminary purchase agreement exists.

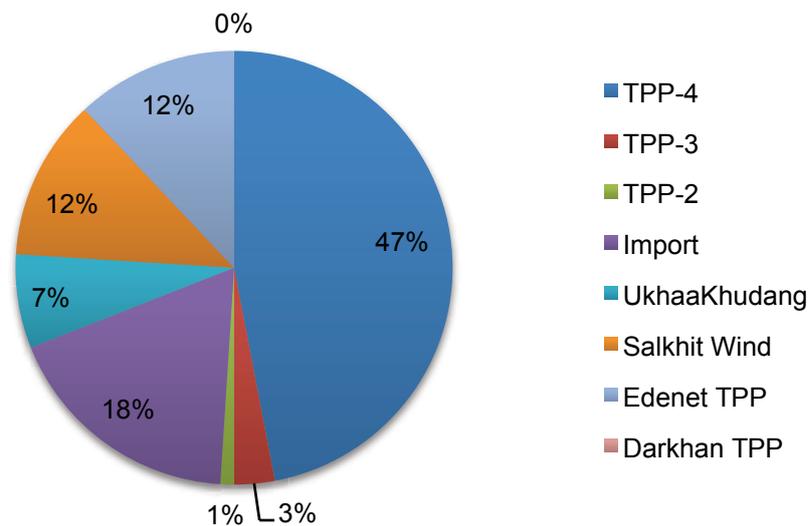
What is also problematic in the priority projects of the government is the technology as both major power plants projects are designed to be subcritical plants using dry cooling systems. When challenged over these aspects, the Ministry of Energy argues that this would ensure stability of supply for the system.³¹ The same argument was given by the chief engineer of the current 20 MW power plant at the Energy Resources coal mine site as to why the design of the Tavan Tolgoi power plant includes 4 small units of 150 MW each instead of a more efficient larger unit. According to him, the division into smaller units would provide more flexibility and would make the power supply reliable in case of failure at any of the units - stability which cannot be ensured by a single larger unit.³²

The Ministry of Energy argues that currently the power grid does not allow for capacity from renewable energy sources and that plans for new coal

and hydropower capacity will ensure the necessary stability in the grid so that afterwards it can invest more in renewable energy sources: “300 MW is planned for hydropower, which will allow another 300MW for wind and solar, and together with the new planned power plant, the capacity will reach 2500 MW until 2023.”³³ There is no publicly available analysis that looks into the capacity of the CES to integrate renewable energy sources. Given that the CES is the largest and most well connected system from Mongolia’s power system, supplying around 80 per cent of the electricity, there is a need for further analysis into the capacity of the CES to integrate electricity from wind and solar plants, alternatively integrating solutions such as balancing peak load with imports.

The dark side of demand

While demand from the formerly booming economy and reliability of coal-based energy are presented among the major arguments in favour of new coal power plants, it is not difficult to understand that politics and business interests, national and regional, are also in the driving seat of coal investments in Mongolia. As a country that experienced an unprecedented economic boom



Mongolia's electricity consumption by sector

in 2010-2012, Mongolia seems to have developed a strong addiction to resource exploitation and fails to look beyond this, even for its energy sector. Furthermore, according to the ADB country representative, realistic growth projections are currently at around 1 per cent per year. This makes even more urgent the need for due diligence on the government's pipeline of projects with accurate power demand assessments: "at that time they were estimating power needs, they were having 17 per cent GDP growth rate but now we are only projecting less than 1 per cent GDP growth."³⁴

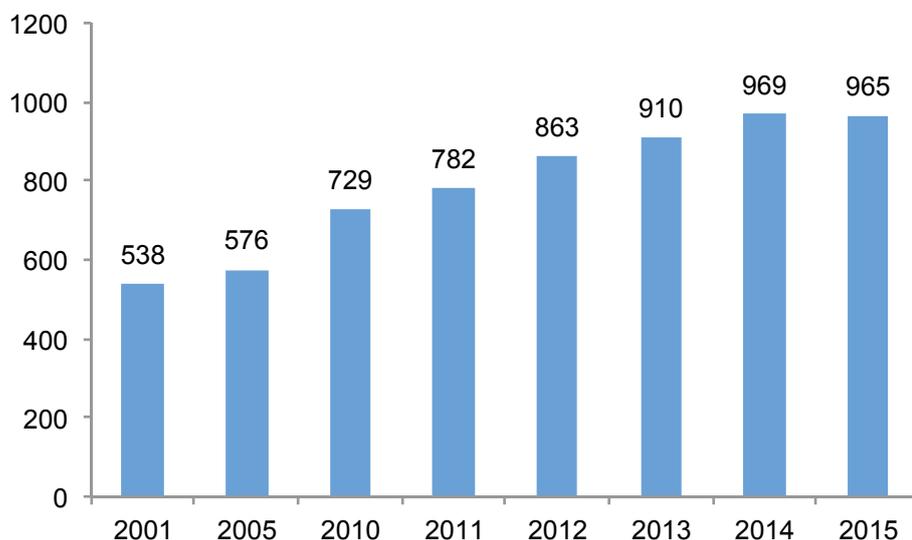
The stagnation of economic growth in Mongolia since 2012 is the result of low commodity prices and a decrease in FDI investments in Mongolia. A new series of restrictions and controls by the Mongolian government in 2012, together with all the changes in the political spectrum, led to a 74% decline in FDI in Mongolia in 2014.³⁵

In a 2017 project appraisal document, the World Bank also admits³⁶ a much lower projection for economic growth in Mongolia, but still a very optimistic one based on the assumption of stabilisation of the commodities market: "In the medium term, GDP

growth is expected to remain stagnant and in 2017 it is expected to reach 2 per cent. A gradual recovery will follow and in 2018 the mining sector is forecasted to start to pick up mainly driven by a stabilisation of the commodity market. The World Bank currently forecasts Mongolia's GDP to bounce back to 3.5 per cent in 2018 and to 3.7 per cent in 2019."³⁷ Therefore, the current power demand projections are based on an economic growth rate that is impossible to reach any time soon.

Given that it is not anymore urgent for the government to build new capacities due to the economic slowdown, the responsible authorities with the support of international development agencies and financiers in the country should gear their efforts towards building an alternative energy strategy based on energy efficiency and integrating more RES in the system. According to the figure below, electricity demand in the CES has been stable for the past couple of years with demand remaining in the range of 900 MW since 2013.

Overall in Mongolia, information from the Ministry of Energy and from the International Energy Association³⁸ shows that a total of 6682 mln GWh



Peak Demand growth in the Central System

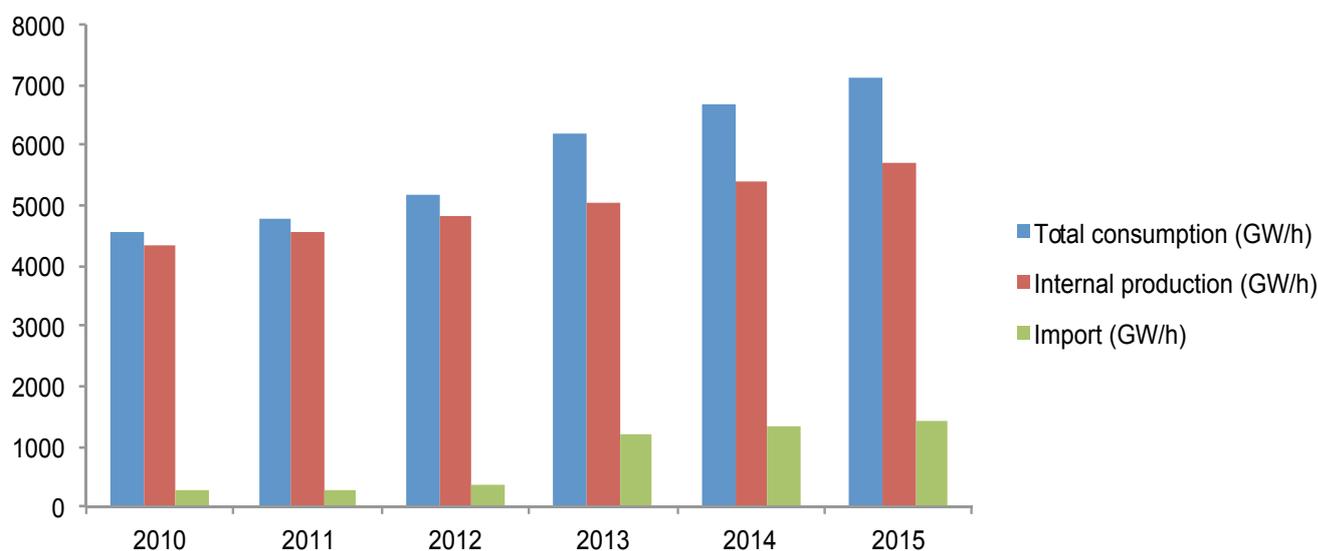
were consumed in 2014 and 7119 in 2015. There is an increase in thermal power, solar power, and in imports as shown in the figure below. It can be noticed that imports have increased significantly in 2012 when Oyu Tolgoi started importing electricity from Inner Mongolia and that imports for Oyu Tolgoi contribute significantly to the increase in the past four years.

Since 2012, mining activities have not increased output. Neither Energy Resources nor Erdenes Tavan Tolgoi, the main companies extracting and exporting coal from the Tavan Tolgoi coal deposit, have increased their extraction capacity due to low commodity prices. Moreover, new processing facilities of coal mines from the Tavan Tolgoi coal deposit are also on hold given the stagnation in demand.³⁹ On the other side, Oyu Tolgoi phase 2 has also been on hold due to negotiations with the government.

With respect to Oyu Tolgoi, the demand for electricity is assessed as part of the 2012 Environmental and Social Impact Assessment (ESIA) for phase 2, the development of the underground mine as well as in the 2016 ESIA,⁴⁰ which does not bring any new information. There, projections speak of an increase from 145 MW at start to

246 MW when the underground mine is completed.⁴¹ These projections from 2012 are accompanied by an analysis of alternatives for power supply at Oyu Tolgoi, an analysis that is not only outdated given rapid changes in the renewables sector and that focuses mainly on phase 1 power needs at Oyu Tolgoi for which it concludes that the base load needs of the mine should be secured from coal power plants. However, the analysis does not detail the projected numbers for phase 2 and fails to assess options for a mixed power supply for the second phase of mine development that would integrate RES.

Eventhoughincreasedenergydemands from the side of the population and industry needs to be acknowledged, the projects that have been floating around are clearly exaggerated and the planned 12 GW for the next 30 years (including 9 GW for export) are way over any imagined projections scenario. The figure above compares projected demand as seen by the government,⁴² based on a 9 per cent annual growth in electricity demand (including a 15 per cent safety reserve margin) with planned capacities for the next 13 years, as outlined in the 2015 energy policy. In can be noticed that even when comparing with a



Peak power demand in Mongolia including Oyu Tolgoi [GW/h]

high growth scenario development by the Mongolian government, planned capacities (excluding capacities designed for export) are exceeding by far the projections. The government should not embark on any commitments towards international investors before an up-to-date analysis of power demand projections is made and before a strategic environmental assessment is carried out for the energy policy.

Given the dire situation of the Mongolian economy and the high deficit, it is unlikely that there will be any major financial contributions from the government in the pipeline of coal projects. At the same time, the government cannot issue guarantees for energy projects, following IFC policy advice. However, power purchase agreements do act as guarantees. In the case of the Tavan Tolgoi power plant, the power sector cooperation agreement between Oyu Tolgoi and the government represents a guarantee for the project. In the case of CHP5 the government is still negotiating the price of electricity with the project consortium developing the project, an aspect which seems to be one of the main points of disagreement between the two. Power purchase agreements will serve as a guarantee also in this case.

Moreover, the government is expected to subsidise the price of electricity for CHP5, as it has been doing so far. According to the ADB country representative, there is “the issue of affordability and the issue of subsidies. For some sectors of the population, the cost [of electricity] would be too high anyway and there will be a need for subsidies but the government is not in the position to provide more.”⁴³

IFIs’ policy loopholes

The coal power plant projects in Mongolia are supported or considered for financial support by a broad range of actors, including the private sector arm of the Asian Development Bank, loans from Chinese banks as well as South Korean, Chinese and Japanese companies and export credit agencies.

International Financial Institutions including the World Bank, EBRD, EIB committed in 2013 to not financing new coal capacity. However, in the case of Mongolia, there is no clear commitment in country strategies to not finance new coal capacities, while information gathered during meetings with the IFC and ADB country office, show that support for connected facilities of new plants might be considered due to extreme weather

conditions in winter and grid capacity. Even so, International investors and the Mongolian government have to bear in mind that exceptions cannot be made without a thorough screening of projects against the IFIs' criteria for financing coal projects and that connected facilities need to be assessed against their cumulative impact.

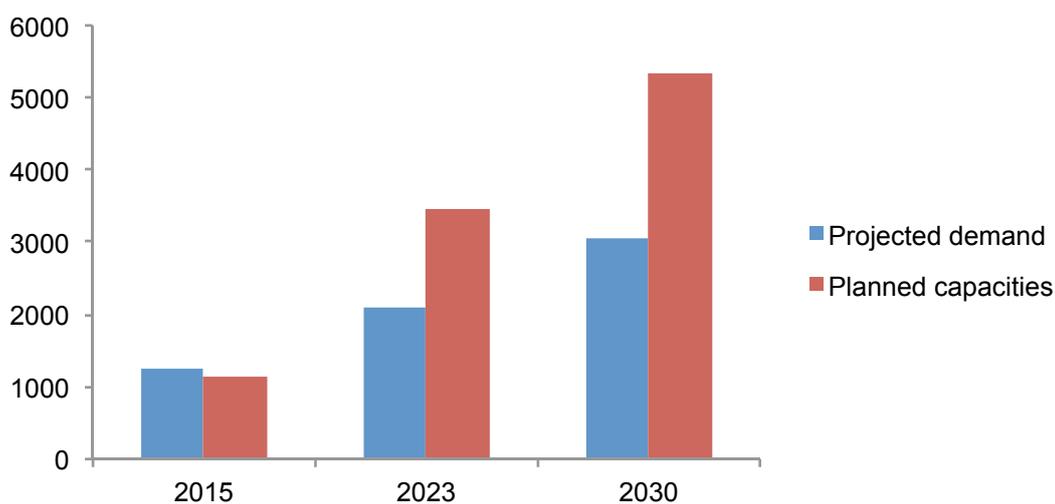
From the World Bank criteria, it is essential, given the context of high inefficiency of the sector in Mongolia, that the government and financiers prioritise loss reduction in the power grid and reducing internal consumption of existing plants. However, new subcritical coal capacities are currently being prioritised at Tavan Tolgoi and CHP5, breaching another criterion on the use of best available techniques and consideration of viable alternatives.

Multilateral development banks such as the ADB, the EBRD, IFC as well as donor agencies much present in the country such as JICA [the Japanese International Cooperation Agency] have their strategies clearly stating the objective of sustainably developing the energy sector in Mongolia. There is a well-justified reluctance to provide direct support to the construction of new power plants and the ADB Mongolia country office has stated that its new country strategy for

Mongolia will clearly exclude support for new coal capacities. With respect to the EBRD, the bank finances new coal capacities only under exceptional circumstances when there are no other options - which many argue is the case in Mongolia.

Criteria for Screening Coal Projects under the Strategic Framework for Development and Climate Change

1. There is a demonstrated developmental impact of the project, including improving overall energy security, reducing power shortage, or increasing access for the poor.
2. Assistance is being provided to identify and prepare low carbon projects.
3. Energy sources are optimized, looking at the possibility of meeting the country's needs through energy efficiency [both supply and demand] and conservation.
4. After full consideration of viable alternatives to the least cost [including environmental externalities] options, and when the additional financing from donors for their incremental cost is not available.
5. Coal projects will be designed to use the best appropriate available technology to allow for high efficiency and, therefore, lower GHG emissions intensity.
6. An approach to incorporate environmental externalities in project analysis will be developed.



Electricity Demand projections versus Planned Capacities. Note: Planned capacities do not include Shiv Ovoo as it is clearly stated that it is planned for export.

However, these restrictions on providing direct finance do not stop IFIs from providing support to other activities related to the construction of new coal power plants. The ADB country office has been providing technical assistance to the government for the planned CHP5 in Ulaanbaatar. Additionally, there is a project in the pipeline for the modernisation of the heating system and transmission lines in Ulaanbaatar, a project that is necessary for the new planned coal facility in Ulaanbaatar [CHP5] that requires modernised infrastructure. The project would be supported by the Ulaanbaatar country office through a sovereign loan.

With respect to the EBRD, information gathered during Bankwatch's recent field visit indicated that the EBRD might be considering support for the construction of the coal railroad, part of the CHP5 project. At the same time, the IFC country director has also stated that while the IFC is not providing any support for the construction of coal power plants, support for connected facilities might be considered if they prove to have broader use, such as rail or transmission lines. From a different angle, the IFC and the EBRD

are providing financial support to the Oyu Tolgoi mine, the main client of the planned Tavan Tolgoi coal plant.

The energy sector of Mongolia still provides prospects for foreign companies, export credit agencies and private sector arms of multilateral development banks. The private sector arm of the ADB is providing a USD 150 million loan guarantee⁴⁴ for the construction of CHP5, the project being developed by a consortium including South Korea's POSCO and France's ENGIE. On the Tavan Tolgoi power plant project, a recent investment agreement has been signed between the government and Japan's Marubeni. The developer has to provide 30 per cent of the USD 1 billion estimated costs while the other 70 per cent has to be secured from international finance.

The fact that coal power plants are still being planned in Mongolia is the logical consequence of flawed government policy combined with international financial institutions policy loopholes and double standards. International export credit agencies and financial arms of multilateral development banks, such as the ADB private sector arm, provide support for

the development of the power plants themselves and the aid agencies and development banks provide the technical expertise and support for connected infrastructures.

While technical assistance is provided by IFIs to the Mongolian government including IFC policy advice for reform of energy sector in Mongolia towards increased efficiency and economic viability, IFIs stipulate few or no concrete requirements for policy actions on sustainable energy by the Mongolian government allowing the government to continue with its pipeline of projects. The current situation seems to benefit all but Mongolian citizens: the coal business, the foreign investors bringing their outdated technology which is being phased out in western countries, and the government.

Another example comes from the ADB. The bank's country office has also been managing a \$30 million Climate Fund in Mongolia, providing technical expertise to the government on renewable energy. In the case of the ADB, the dichotomy between the country office handling sovereign loans, the climate fund and the private sector office that manages the guarantee for the new power plant number 5 in Ulaanbaatar, shows the double standards of international investors and lack of coherence

between financial instruments at their disposal.

When asked about support to energy efficiency projects, the ADB country representative stated that "we can only do what they [the government] ask us to do."⁴⁵ However, public multilateral development banks that have committed themselves to support the Paris Agreement on climate change ought to align the instruments at their disposal and be coherent in their actions. In this sense, financial support and technical assistance of IFIs present in Mongolia should be tied to policy actions that gear the country towards energy efficiency and energy scenarios based on renewables.

COAL INVESTMENTS LACKING COMMUNITY OWNERSHIP

The previous chapters have discussed the dynamics behind the priorities of the Mongolian government in the energy sector and the myths and double standards behind the push for major coal power plant investments in the country. This chapter will continue and assess the implications that the lack of accountability and due diligence for the current energy policy bears for society and especially for the local communities in close proximity to the sites of the two major coal power plant projects, CHP5 and Tavan Tolgoi. The chapter will discuss the potential human rights violations of coal investments and the lack of proof of inclusive and sustainable development impact of major projects such as Tavan Tolgoi and Oyu Tolgoi in ensuring energy security and inclusiveness in the energy sector for the poor.

The current legislation in Mongolia on environmental impact assessment provides that the public has to be consulted in the development phase of a project. According to the Ministry of Environment and to the Mongolian EIA law adopted in 2012, “the detailed environmental impact assessments have to be shared also with the Governor’s office in the area where the project is to be implemented [Art. 8.7 of the EIA law] and “during the process of preparing report, the legal body, that is undertaking project detailed impact assessment shall organise the meeting and collect the feedback from the local authority and community who will be affected by the project.” [art 18.4 of the EIA law]⁴⁶

With respect to monitoring and reporting mechanisms, private companies have to report to the Ministry of Environment according to their environmental management plans which are developed along with the detailed environmental impact assessments, management plans that includes elements of risk mitigation of environmental impacts.

When researching the environmental documentation on energy policies and priority energy projects in Mongolia, major flaws in transparency come to the surface. The latest energy policy approved in 2015 was not complemented by a strategic environmental impact assessment [SEA]. Nor has the infrastructure priority plan⁴⁷ released by the new government in 2016 and including both energy and transportation related priority projects, has been subject to SEA. Given the number and the sheer size of the priority power plants and transmission lines⁴⁸ in the pipeline for next years, the lack of strategic environmental impact assessment including the lack of cumulative impact on water of all energy projects and the lack of consultations with the population on the projects that are shaping their future energy mix, is highly problematic. The lack of SEA for the energy policy is a clear breach of the right to participation in decision making by the Mongolian government and diminishes the legitimacy of the policy.

With respect to specific power plant projects, deficiencies in transparency and public participation are also present. Although the ADB-financed CHP5 project documentation has been made available, there are gaps in consultations with communities and as locals to be displaced by the project are lacking up-to-date information. For the Tavan Tolgoi power plant project, there are clear breaches in transparency and public participation as no documentation has been made available and a survey conducted locally indicated that consultations have not taken place.

Combined Heat and Power Plant No. 5

The Combined Heat and Power Plant Number 5 [CHP5] Project in Southeast Ulaanbaatar, in the Khuliin Valley, plans to supply singled 463.5 MW gross of electricity or combined 426 MW gross of electricity and 587 MW of thermal energy for district heating. The project has been in the pipeline for several years and according to information collected during the Bankwatch field visit, the project is currently on hold due to ongoing negotiations between the government and the CHP5 project unit on the tariffs for electricity and heating.

The consortium for the implementation of the project, the Fifth Combined Heat and Power Plant LLC, includes GDF

Suez from France, Sojitz from Japan, POSCO Energy from South Korea, holding thirty per cent shares each and Newcom from Mongolia holding ten per cent.⁴⁹ The project company is seeking finance from the ADB private sector arm,⁵⁰ the Japanese Bank for International Cooperation (JBIC) and Nippon Export and Investment Insurance (NEXI).⁵¹

As described by the ADB in the available 2015 ESIA and in the Initial Poverty and Social Analysis,⁵² the project is argued to contribute to inclusive growth by supplying heat and electricity to the urban poor in the capital city. Although it will not contribute directly to reducing poverty, the documentation argues that it will do so indirectly by providing reliable electricity and heating and by improving air quality through the replacement of aging and inefficient power plants. Even so, the documentation provides little to no information on the exact groups of people that will benefit from the increased heating and electricity capacities and whether any of the already functional power plants in the capital will be closed as CHP5 becomes operational. It is doubtful that the urban poor of Ulaanbaatar living in the ger districts will benefit from the new heating capacities as the gers cannot be connected to heat pipes. At the same time, it is doubtful that building another power plant

inside Ulaanbaatar will contribute to improving air quality.

Although Ulaanbaatar is currently one of the most polluted capitals in the world, with PM10 annual average exceeding 200 µg/m³,⁵⁴ and with disregard to the Paris Agreement's goal of limiting climate change to below 1.5 degrees Celsius, the government continues to consider CHP5 a priority project. Moreover, the CHP5 is based on subcritical boiler technology of 463.5 MW and not in line with the standards of Sector Understanding for Coal-fired power plants in OECD Arrangement on Officially Supported Export Credits, agreed upon in November 2015.⁵⁵ Even so, as shown in the timeline above, two export credit agencies, JBIC and NEXI, are considering financing the plant.

Besides the two Japanese export credit agencies, the ADB private sector arm is also involved in the project, for which it is considering a guarantee. The ADB itself also released a draft ESIA for the plant but it continues to refuse disclosure of the latest ESIA as requested by the Japanese group JACSES (Japan Center for a Sustainable Environment and Society). Furthermore, with regards to social and environmental due standards, the resettlement plan for the project is still not completed. However, according to information collected during the Bankwatch visit to the project site, around ten families

Timeline of the CHP5 project

from the site have moved but have not received compensation. This includes families that have sold or closed their businesses located on the project site and relocated to other places without receiving compensation or having their livelihoods restored.⁵⁶ The lack of compensation prior to loss of livelihoods of people represents a clear violation of the ADB's Safeguard Policy Statement (SPS).

The draft ESIA for CHP5 available on the ADB website is also incomplete given that a number of connected facilities to the planned power plant are not included and assessed. These include transmission lines, ash disposal facilities, railroad for transporting coal, among the most important. The refusal of the ADB to release the latest ESIA as well as the incomplete form of the available one, prevents civil society groups from having the capacity to fully assess the implications of the project, especially with regards to impact on air quality and biodiversity. Moreover, even though the project is currently on hold, regular meetings and consultations with local communities should take place in order to allow communities to ask questions and to prevent people feeling obliged to relocate by themselves and without proper compensation and restoration of livelihoods.

The CHP5 project is far from an inclusive

September 28, 2011	The Government of Mongolia starts to advertise competitive bids on CHP5 concession. ⁵³
April 27, 2012	Asian Development Bank (ADB) starts its consideration for financing.
July 6, 2012	Sojitz, one of the developers, announces that they were elected as a preferred bidder.
August 26, 2013	The Government of Mongolia and the project company conclude the MoU.
June 12, 2014	The Government of Mongolia and the project company conclude the Concession Agreement.
March 25, 2015	NEXI starts its consideration for financing.
August 2015	The project company holds public hearings with local residents three times at Khoroo [17, 25 and 26 August]
October 2015	ADB releases the draft Environmental and Social Impact Assessment (ESIA) for CHP5.
April 2016	The project company submits revised edition of ESIA to ADB.

development project as there is lack of proof over its potential to secure sustainable energy for the poor while improving air quality and to respect human rights and participation rights of local communities in the project's different phases.

Tavan Tolgoi power plant

The planned 600 MW Tavan Tolgoi power plant has been under discussion for many years now and, while it is considered critical for the projected power needs at three major mines in the South Gobi region, including Oyu Tolgoi, a recent Bankwatch field visit shows a complete lack of participation by locals in discussions about the project, and as well no assessment of power alternatives for the water scarce region. Given the location of the power plant in the Southern Gobi Desert and the importance it is given by the government for supplying mines in the region, some with funding from international financial institutions, it is crucial that the project development respects international standards regarding public participation, transparency and assessment of alternatives. Furthermore, similar to CHP5, the project ought to prove that it contributes to sustainable development by supplying energy to the poor (the first criteria from the Criteria for Screening Coal Projects under the Strategic Framework for

Development and Climate Change), something that is doubtful in the case of a power plant designed to supply mining companies.

Information found online and confirmed by the Ministry of Environment shows that a feasibility study for the TT power plant was in conducted in 2013, with a study done for a 300 MW power plant. Although the study is not available, the subsequent General EIA and Detailed EIA for the TT power plant were developed based on the approved feasibility study from 2013. However, the later documentation concerns the development of a 450 MW power plant at Tavan Tolgoi while officials claim that the project needs to be designed in a flexible manner to allow for an increase in capacity of up to 600 MW to meet potential increased demand from Oyu Tolgoi.⁵⁷ The difference in the designed capacity of the power plant in the different studies conducted is only one of the reasons to have the documentation invalidated.

When it comes to transparency and participation in decision-making, the Tavan Tolgoi project unit in the Ministry of Energy has so far not released the Environmental Impact Assessments for the power plant and for the connected transmission line that will go to Oyu Tolgoi. In addition, according to information from a meeting with a citizens' representative from

Tsogttsetsii, no recent documents were submitted to the soum⁵⁸ for consultations although the Ministry of Environment states that since the project was approved, consultations must have taken place. A survey conducted locally by Bankwatch in August 2016 shows that even though people have heard about the project mostly from the media, no public consultation took place and no project documentation has been seen.⁵⁹

The region where the project is planned has suffered immensely from the degradation of pasture land, forcing nomads into relocation or poverty. At the same time, the Tsogttsetsii soum is already affected by heavy pollution from coal burning and its proximity to coal mines and the positioning of the future TT power plant just 5 km from the city will greatly impact on the health of the population. Therefore, the Mongolian government is not taking into consideration the real costs on its citizens of such a project.

Even though no information was publicly made available on current assessments being undertaken by Oyu Tolgoi LLC for power options, in a recent meeting in Ulaanbaatar, the mining company's representative expressed its full support to the Mongolian government for the development of TT power plant. The decision seems to be rooted rather in political and economic

interests rather than on an accurate analysis of options by Oyu Tolgoi, as specified in the power agreement signed in 2014 with the government.

When approached by Bankwatch with questions regarding the choice of Oyu Tolgoi LLC for the Tavan Tolgoi project as the best option, both the EBRD and the IFC denied that OT had chosen the project. In their response, the two IFIs declared that no option had been picked yet by OT and that if the Tavan Tolgoi option were to be chosen in the future, it would be considered an Associated Facility to the OT mine. Both the EBRD and the IFC stated that they will use their best efforts to influence the project developers to respect international standards.

The existing confusion with regards to the choice of Oyu Tolgoi LLC for the Tavan Tolgoi project as its future power supply leaves space for misconduct on behalf of all stakeholders, impacting on the rights of local communities and civil society to fully participate in the development of the project. While OT is not clear on its choice and is not providing an official analysis and argumentation to the public and to its financiers on the option for power supply for phase two of mine development, the government is moving ahead with obtaining environmental permits and seeking investors in the projects, making it

seem as OT will be the main client of the future plant.

The Tavan Tolgoi project is a strong example of the major flaws in the energy priority plans of the government of Mongolia which do not prove their added value to community needs and fail to incorporate an inclusive process in which communities can learn about the different options and be equally consulted. Instead, mining companies are driving the priorities based on unrealistic economic growth projects. Although an acknowledgement of the need for investment projects in the energy sector in Mongolia has to be made, given the harsh winters in the country, the energy poverty and the aging state of its power capacities and distribution lines, these investments need to be as modest as possible, as sustainable as possible, and be carried out in close connection with local people in accordance with local realities. The currently planned 12 MW of coal based energy is recipe for an environmental and health disaster. However, there are concrete measures that can and should be taken by international financiers in order to leverage opportunities for the country to take a different path, in line with international climate change imperatives and Mongolia's RES potential. At the same time, there are actions that ought to be taken by civil society in Mongolia in order to

scrutinise the plans of the government and demand alternatives.

International Financial Institutions including the EBRD, the ADB and the IFC should fully align their commitments on not financing new coal power plants by including connected facilities without which the power plants projects are incomplete. These commitments should be clearly outlined in sectoral and country strategies. IFIs should prove an active commitment towards promoting and supporting the development of renewable energy sources, especially in Mongolia where the potential is massive. At the same time, country strategies for Mongolia should outline the support of IFIs to increased energy efficiency including residential retrofitting and reducing losses in transmission and distribution. Rehabilitation of existing CHP capacities may be necessary to prevent new coal capacities being built, but this issue and the question of whether there are alternatives should still be explored. Lastly, IFIs should include clear policy actions tied to their finance that are to be taken by the Mongolian government, actions that can include improving RES legislation and regulation, developing strategic environmental assessments for energy and infrastructure policies.

With regards to civil society and local communities, given the lack

of action and engagement from the government, groups should continue demanding that strategic environmental assessments are developed for the existing energy and infrastructure policies in order to assess the real costs of priority projects on the environment and the people. In the same time, independent analysis of specific priority projects and the rhetoric around their importance should continue being developed along with alternative plans for meeting what is actually a slow increase in energy demand. Plans for developing energy projects should take into account the country's thermal, wind and solar potential and should concretely outline how they meet the needs of the ones living in energy poverty, not the needs of the mining sector where investments are stagnating.

Mongolia is indeed currently at a crossroad and which path it will take can be positively influenced primarily by its civil society, international actors present in the country, as well stakeholders from other sectors, including the national business sector, as everyone can benefit from a safe and environmentally benign development process.

Questions for further research and discussion

Further research on the topic of energy

projects, priorities and alternatives in Mongolia needs to be developed, in parallel with opening new channels of communication and awareness raising with civil society groups in Mongolia and with relevant stakeholders present in the country. Key issues to be explored further include:

- What options can be developed for integrating more renewable energy to the power grid starting now taking into considerations the challenges related to the intermittency of wind and solar power and the controversies around hydropower plants? What investments are needed, including investments in the existing aged power grid, in order to better incorporate intermittent renewable energy?
- Given the increasing urbanisation in Ulaanbaatar, along with the increased demand of heating, and taking into consideration the urgency in addressing air pollution in the city, what are the best solutions for developing and improving efficiency of heat and power in Ulaanbaatar? Alternative options for increasing efficiency of houses and of transmission infrastructure as well as rehabilitation of old plants can be considered and opted for against the option of building new CHPs. For such investments, options for investments need to be assessed.

- As a large part of the urban population in Mongolia lives in ger districts, it is clear that CHPs cannot help reduce pollution coming from here or supply heating to them. Proposed CHP projects are not providing any solution and therefore, there is a need for a long-term vision for sustainably addressing the issue of heat demand and pollution in the ger districts.

Annex: Meetings during Bankwatch field visit, August 2016

- Enkhtaivan.G, Specialist Department of Energy Generation Planning & Policy, Ministry of Energy;
- Mr. Oyunbat.D, chairman of Cleantech LLC; Mr. Badamdandin Ragchaa, president of Mongolian Wind Energy Association; Mr. Myagmardorj Enkhmend, executive director of Mongolian Wind Energy Association;
- Mr. Tumentsogt, CEO General Electric;
- Senior Specialist in Mining Policy, Ministry of Mining and heavy industry;
- Sato Mutsumi, Chief Representative JICA [Japanese International Cooperation Agency]; ABE Masanori Representative of Mining, Energy, Health for JICA; E. Zolboo, Program Officer JICA;
- Head of Center for Environmental Health and Toxicology of the Public Health Institute, Ministry of Health and Sports of Mongolia;
- President of Municipality Council, Tsogttsetsi soum;
- Natsagdash Ryenchin, Head of mining section, Erdenes Tavan Tolgoi;
- Energy Resources - head of mining operations and head of the 18 MW coal power plant division;
- Mr. D. Jamiyan, Representative of the Mongolian National Mining Association;
- South Gobi Aimag vice governor; Specialist for economic development, Dalanzadgad;
- Aimag vice-governor, Khanbogd; Head of infrastructure, Khanbogd;
- Head of the Bayan bogd, Khanbogd soum;
- Meeting with technical engineer of the Khanbogd power station
- Tuyen D Nguyen, IFC Country Representative; Enkhbileg Enkhjargal, Consultant of Infrastructure & Natural Resources for IFC;
- Yollanda Fernandez, ADB Country representative;
- Tulga Mendjurgal, Officer, Department of Environment and Natural Resources Management, Ministry of Environment;
- Oyu Tolgoi Meeting; Principal Advisor for External Affairs, Head of energy related affairs and representative of Compliance Community Department

Endnotes

1. <http://bankwatch.org/sites/default/files/briefing-biodiversity-offsetting-MNG-25May2015.pdf>
2. http://www.cao-ombudsman.org/cases/default.aspx?region_id=1, <http://www.ebrd.com/work-with-us/project-finance/project-complaint-mechanism/pcm-register.html>
3. Prioritised Solutions to close the water gap, 2030 Water Resource Group Mongolia partnership, June 2016
4. The issue of reducing pollution from individual heating in gers is a complex one that is not covered by this briefing. However it should be borne in mind that investments into central district heating plants in Ulaanbaatar will not address this issue and need to be complemented by other types of action more specifically aimed at ger-dwellers.
5. <https://www.adb.org/projects/46915-014/main>
6. <https://www.adb.org/news/mongolia-appoints-adb-advise-ppp-heating-and-power-plant-ulaanbaatar>
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