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GOVERNMENT OF REPUBLIC OF KOSOVA

Ministria e Zhvillimit Ekonomik
Ministarstvo Ekonomskog Razvoja
Ministry of Economic Development

ENERGY INDEPENDENCE FOR KOSOVO

Kosova e Re *powerplant*

Energy Independence for Kosovo



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LIST OF ABBREVIATIONS

BAT – Best Available Techniques

BREF – Best Available Techniques Reference Documents

CCR – Carbon Capture Ready

CFBC – Circulating Fluidized Bed Combustion

CG – Contour Global, private partner in KRPP project

ECA – Export Credit Agency

EOI – Expression of Interest

EPC – Engineering – Procurement – Construction (Contractor)

ERO – Energy Regulatory Office

ESIA – Environmental and Social Impact Assessment

GENCO – Generation Company

GOK – Government of Republic of Kosovo

IED – Industrial Emissions Directive

IFI – International Financing Institutions

IRR – Internal Rate of Return

KEK – Korporata Energjetike e Kosovës J.S.C.

KESCO – Kosovo Energy Supply Company

KOSTT – Transmission, System and Market Operator

KRPP – Kosova e Re Power Plant

LCPD – Large Combustion Plants Directive

LSA – Lignite Supply Agreement

LTM – Long Term Maintenance (Contractor)

MED – Ministry of Economic Development

MW – Mega Watt

MWH – Mega Watt hour

MWth – Mega Watt thermal

NKEC – New Kosovo Energy Corporation

O&M – Operation and Maintenance

PCC – Pulverized Coal Combustion

PIU – Project Implementation Unit

PPA – Power Purchase Agreement

PPP – Public Private Partnership

PSC – Project Steering Committee

PV – Photovoltaic

RES – Renewable Energy Source

RFP – Request for Proposals

TPP – Thermal Power Plant

FREQUENTLY ASKED QUESTIONS

A. KOSOVO ENERGY POLICY QUESTIONS

1. HOW DOES KOSOVO PLAN TO MEET ITS ENERGY DEMAND IN THE FUTURE?

Provision of a sustainable, high-quality, safe, and reliable energy supply is one of the main conditions for economic and social development of any country. This problem has become acute in Kosovo and it requires an urgent solution, even though any solution will require substantial investment in the sector.

One challenge confronting the Kosovo energy sector is the need for progress on three fronts all at the same time: intervention to rehabilitate existing capacity; construction of new capacities (including RES) to replace outdated thermal plants; and investment in development of new lignite mining fields. Such undertaking will require nearly simultaneous investment of 2 – 3 billion Euros over the next 10 years.

The recently adopted Energy Strategy of Kosovo 2017-2026 sets out the basic objectives of the Government of Kosovo in energy sector development, taking into account sustainable economic development, environmental protection, sustainable and reliable energy supply to end customers, efficient use of energy, development of new conventional and renewable generation capacities, creation of a competitive market, development of the gas system, and creation of new jobs in the energy sector.

The Energy Strategy recommends several measures to meet the following five strategic objectives:

1. Security of a sustainable, high-quality, safe, and reliable electricity supply with adequate capacities for stable power system operation;
2. Integration in the Regional Energy Market;
3. Enhancement of existing thermal system capacity (space heating) and construction of new energy capacity;
4. Development of natural gas infrastructure; and
5. Fulfillment of targets and obligations in energy efficiency, renewable energy sources (RES), and environmental protection.

Main measures to achieve Objective 1 include:

- Construction of the new Kosova e Re Power Plant (KRPP) in accordance with environmental criteria set in the Industrial Emissions Directive (IED) and the possibility for co-generation use of at least 10% its net capacity.
- Continued operation of TPP Kosovo A until its replacement by Kosova e Re Power Plant.
- Completion of the rehabilitation of TPP Kosovo B for environmental compliance and extension of its operational life to 2040.
- Ensuring uninterrupted coal supply by developing a new mine.
- Continued support to develop new RES capacities.
- Reduction of technical and commercial losses in the electricity distribution system.
- Development of a program for protection of vulnerable customers.
- Implementation of best practices for the treatment of communities affected by electricity activities.

2. WHAT ARE THE AVAILABLE RESOURCES FOR POWER GENERATION IN KOSOVO?

It is a well-known fact that Kosovo has large lignite reserves (third largest in Europe after Germany and Poland). The lignite was and remains the dominant source of domestic fuel for power generation in Kosovo, feeding the exiting and still operating TPP Kosovo A and TPP Kosovo B. Kosovo's lignite has fueled development of the country's economy for the past half-century.

The future role of lignite coal in Kosovo is directly linked with continued operation of TPP Kosovo B up to year 2040 and construction and operation of the new lignite-fired Kosova e Re Power Plant (500 MW) for next 40 years.

The current mining output varies around 8 million t/year. This level of output will remain until year 2040 and with decommissioning of TPP Kosovo B the mine output will drop to 4.0 million t/year.

With no plans to construct additional new lignite-fired power plants (beyond Kosova e Re Power Plant), the role of coal in Kosovo's energy mix will lose its importance and future generation capacities will have to rely exclusively on Renewable Energy Sources (RES).

The use of RES in energy generation represents a long-term target for the implementation of three energy policy milestones of the country: support of overall economic development; increased security of energy supply; and environmental protection.

The true potential of RES in Kosovo has not been evaluated fully and the currently known potential remains highly underutilized. The main RES in Kosovo are modest hydropower potential (small hydro power plants), wind energy at lower margin of wind speeds, photovoltaic energy (PV) potential, and very limited biomass resources.

The utilization of wind and photovoltaic potential is also linked to continuous global technological progress in harvesting this potential, with improvements in low-wind turbines, increased efficiency of PV panels, lower installation costs, and combination of RES sources with energy storage options. With these technological advancements, the true potential of available RES in Kosovo will hopefully be utilized to a maximum possible level.

3. WHY DOES KOSOVO NEED A NEW COAL-FIRED POWER PLANT?

Even though Kosovo has vast reserves of lignite coal, since 1984 there has been no investment in the construction of new generation capacity or substantial rehabilitation of existing power plants, with the result that Kosovo now lacks a stable electricity supply. Moreover, power generation technology of the existing plants doesn't meet the environmental criteria defined by EU law. TPP Kosovo A and TPP Kosovo B have a joint installed capacity of 1478 MW, but due to their age, their operational capacity currently is about 915 MW, or 62% of total installed capacity. Existing generation capacity is outdated, needs constant repairs, and operates with inefficient technology. The situation is no better in the coal mines, where outdated mining equipment needs replacement, and challenges exist in relation to implementation of best practices for the treatment of communities affected by these mining operations.

From the standpoint of annual generation and consumption, Kosovo is a net importer of electricity. Consequently, it faces huge problems in terms of securing the necessary quantities of power to cover peak demand, particularly in winter, and in meeting the reserve capacity requirements of the power system.

To ensure security of electricity supply, Kosovo must replace TPP Kosovo A with new generation capacity. In pursuing the Kosova e Re Power Plant (KRPP) project, the Government has carefully considered both environmental and cost factors. In fact, to obtain financing from the International Financing Institutions (IFIs) for a coal-fired power plant, full consideration has been given to all other viable alternatives and their economic costs, as compared to the coal-fired alternative. An Environmental and Social Impact Assessment (ESIA) study was undertaken in 2014 (to be revised, and the revision to be completed by May 2018) to consolidate the results of several earlier studies sponsored by the European Commission, World Bank and other donors, and determine the least-cost option that would allow Kosovo to meet its energy supply and security needs. This study not only analyzed the cost of the alternatives available to Kosovo for meeting energy consumption and peak demand until 2025, but took into account the cost of environmental externalities associated with each option. Specifically, this study addressed not only the thermal fuel options, but each of the available alternative energy solutions, including RES.

The ESIA study (2014) concluded that proposed Kosova e Re Power Plant is the least-cost option to achieve these goals.

Accordingly, taking both environmental factors and cost factors into account, it was the Government’s determination that Kosova e Re Power Plant was the correct solution in the long run, allowing for improvement of energy supply and enabling more secure energy transition from coal dependency to introduction of more Renewable Energy Sources.

The purpose of the proposed KRPP is to ensure a long-term safe and stable source of electricity to support economic growth and development in Kosovo. Its outputs will replace those of Kosovo A and will help to cover the increase in demand and reduce the need for electricity imports. The new plant will also reduce emissions to the atmosphere compared to the existing power plants, Kosovo B and especially Kosovo A, since Best Available Techniques (BAT) will be applied in line with the EU IED. The proposed KRPP will be designed in accordance with the principles and recommendations resulting from the guidelines of the EU on the application of BAT for large combustion plants.

4. WHAT IS KOSOVO DOING TO INTRODUCE MORE RENEWABLE ENERGY SOURCE GENERATION CAPACITIES?

Renewable Energy Sources (RES) represent an important source of energy in Kosovo. The use of RES in energy generation represents a long-term target for the implementation of three energy policy milestones of the country: support for overall economic development; increases in security of energy supply; and improvement of environmental protection.

To encourage the use of RES, Kosovo has implemented a support scheme that relies on feed-in tariffs for hydropower, wind energy, photovoltaic energy, and biomass.

Energy sector laws, in particular the Law on Energy, aim to optimize the use of RES, including the setting of annual and long-term energy generation targets from RES and facilitating their access to the market. To promote the use of RES, the Ministry of Economic Development (MED) has drafted a 10-year Action Plan for RES. As a member of the Energy Community, Kosovo is obliged to meet mandatory RES targets for 2020, as defined and approved by the Energy Community Ministerial Council in 2012. For Kosovo, these targets assume that RES represents 25% of final gross energy consumption, and these targets are established by the National Action Plan. A target of 29.47% was set by the MED’s Administrative Instruction in 2013 and even higher target of 29.89% was set by the MED’s Administrative Instruction in 2017. The actual RES share in final gross consumption in Kosovo in 2015 was 19.7%.

The Transmission System Operator and the Distribution System Operator play an important role in the promotion of RES. They are mandated by law to give priority to RES generation, in line with the limits specified in the Grid Code. A further incentive for RES lies in the legal obligation of the Market Operator to purchase RES generation at the regulated feed-in tariff, as defined by ERO. Currently, feed-in tariffs vary from different RES technologies as follows:

- small hydro power plants: 67.3 EUR/MWh (10-year support scheme)
- wind power plants: 85 EUR/MWh (12-year support scheme)
- biomass power plants: 71.3 EUR/ MWh (10-year support scheme)
- photovoltaics: 136,4 EUR/MWh (12-year support scheme).

By the end of 2017, approximately 62 RES projects had applied for Authorization from the ERO. The table below shows the status of the various projects.

	Hydro		Photovoltaics		Wind		Biomass	
	MW	Locations	MW	Locations	MW	Locations	MW	Locations
Final Authorization granted and in operation	31.2	5	0.602	2	1.35	1	0	0
Final Authorization granted	61.9	16	9.4	4	32.4	1	0	0
Preliminary Authorization granted	28	14	0	0	105	3	0	0
Preliminary Authorization granted - waiting	0	0	15.27	6	35	1	0	0
Applications in review	9.9	1	21	7	64.8	1	0	0
Total	131	36	46.272	19	238.55	7	0	0

FREQUENTLY ASKED QUESTIONS

Status of RES project	Capacity [MW]
Final Authorization granted and in operation	33.15
Final Authorization granted	103.70
Preliminary Authorization granted	133.00
Preliminary Authorization granted - waiting	50.27
Applications in review	95.70
Total	415.82

Today, the efforts of Kosovo to develop new generation capacity are more or less equal for lignite coal and RES. As the role of coal in Kosovo's future energy mix declines (with decommissioning of TPP Kosovo B in 2040 and no plans to build additional coal plants beyond Kosova e Re Power Plant), the role of RES will necessarily increase, setting Kosovo on the path towards radical energy sector transformation. In addition, the new EU policy calls for an end to direct support schemes will require that additional policies to support RES will have to be developed in Kosovo.

5. DOESN'T A NEW COAL-FIRED POWER PLANT HINDER DEVELOPMENT OF OTHER RENEWABLE SOURCES-BASED GENERATION PROJECTS?

As originally planned, the capacity of Kosova e Re Power Plant was 2,100 MW; that has since been reduced to only 500 MW / 450 MW net. This capacity of Kosova e Re Power Plant will not in any way hinder the development of RES projects. Furthermore, the RES projects currently under development enjoy the benefits of the legally-mandated support scheme, feed-in tariffs, long term off-take agreements, and priority dispatch.

With its limited capacity, the mission of Kosova e Re Power Plant is simply to replace the outdated generation units at TPP Kosovo A and increase security of supply by introducing reliable base power (and thermal energy for space heating). Without proper measures to improve energy efficiency and integration in the regional electricity market, Kosovo risks remaining a net importer of electricity in the long run.

With TPP Kosovo B shutting down in 2040, there will be a lot of pressure on RES to fill the gap. In this context it is important to highlight that Kosovo has limited hydro potential, while wind and photovoltaic are still considered intermittent resources, requiring additional investment in strengthening the electricity network, providing for system reserves, and developing energy storage options. The key challenge for Kosovo will be to create conditions that will encourage development of as much RES as possible, to fill the supply gap in the most cost-effective and environmentally sound manner.

6. DO WE NEED A NEW COAL-FIRED PLANT IF WE DEVELOP ALL RENEWABLE ENERGY SOURCES, REFURBISH THE EXISTING COAL-FIRED PLANT AND IMPLEMENT ENERGY EFFICIENCY MEASURES?

Yes, we do. Development of RES potential in Kosovo and implementation of effective energy efficiency measures will take time. Kosovo is also under pressure to immediately shut down the very old TPP Kosovo A that represents almost half of our country's available power generation capacity. One must also consider that most RES potential in Kosovo (solar and wind) consists of intermittent sources that require additional supporting measures to facilitate their access to the market. Considering that most countries in this region are net importers and that the market prices of electricity are subject to variable hydrological conditions, reliance on imports is also not a viable solution for Kosovo's energy security and economic growth.

Kosova e Re Power Plant (500 MW) is needed to guarantee security of supply and to buy the required time to make a smooth transition to RES energy sources.

7. COULD A NEW COAL-FIRED POWER PLANT HINDER KOSOVO'S EFFORT TO JOIN THE EUROPEAN UNION?

Most European Union member states have adopted policies and roadmaps for decarbonization of their energy sector. Countries with no coal reserves, and those with large RES potential, are more aggressive in implementing energy sector

transformation by introducing ambitious deadlines and attractive RES support schemes. Despite this, and mainly because of need for security of supply, in Europe as a whole, there are still new lignite plants currently under construction, or in the process of being commissioned, and there are more than 50 new plants currently in the planning stage. Coal continues to maintain an important share in the energy mix of European countries with lignite coal reserves, such as Germany, Poland, the Czech Republic, Greece, Bulgaria, and Slovenia.

All new lignite coal plants built in EU member states, as well as in the countries of the Western Balkans that are parties to the Energy Community Treaty, are obliged to follow the latest EU environmental legislation, such as ever-stricter emission caps. In our region, such regulations are already being applied on new plants being built in Slovenia, Bosnia and Herzegovina, Serbia, and Montenegro. The same regulations will apply to Kosova e Re Power Plant.

So long as TPP Kosovo B is rehabilitated to operate in compliance with these emission caps, and Kosova e Re Power Plant is built and operated in full compliance with these EU directives (as is required), then Kosovo's lignite coal power plants shall not cause any problems for Kosovo's future EU membership.

8. WHO IS SUPPORTING CONSTRUCTION OF A NEW COAL-FIRED POWER PLANT IN KOSOVO?

Over the past decade, there has been heated debate in Kosovo concerning the construction of this new lignite-fired power plant. The primary focus of the debate has focused on: the capacity of the plant (2,100 MW for domestic demand and export vs 300 MW for domestic demand only); the project structure (lignite mine and rehabilitation of existing generation capacities included in the tendering package or not); and the financing of the project (private vs public financing), as well as the procedures for private sector involvement.

The concept of building a new lignite-fired power plant based on domestic lignite coal resources is currently supported in Kosovo by the entire political spectrum, academia, the business community, and most of the NGOs, and representatives of civil society and think tank organizations.

With intensification of the debate over climate change in recent years, new opposition to the project is calling for cancellation of Kosova e Re Power Plant, decommissioning of TPP Kosova A, introduction of more energy efficiency measures, introduction of more RES capacity, and improvements in the handling of mine development and related social issues. Many of these concerns are now addressed in the recently-approved Kosovo Energy Strategy. Based on findings of multiple independent studies, the KRPP continues to be the lowest cost solution to address the critical concerns of the security of energy supply in Kosovo.

9. WHY IS KOSOVO RELYING ON THE PRIVATE SECTOR TO BUILD THE NEW POWER PLANT, INSTEAD OF THE STATE BUILDING IT ON ITS OWN?

Although the government can almost always lend and borrow money at lower interest rates than private companies (due principally to its taxing powers), private companies can almost always design, operate, and maintain infrastructure or services more efficiently than the government. Considering that Kosovo has a significant infrastructure gap (estimated at 10 billion Euro) and limited financial resources, while at the same time there is appetite from private sector for involvement in energy projects, Government of Kosovo should use its resources to further develop efficient health, education, and other social sectors. Kosova e Re Power Plant Project is considered a Public Private Partnership (PPP) project. In well-structured PPPs, the additional benefits that private companies bring usually outweigh the cheaper costs of public financing.

In this project, both public and private sector parties contribute the things that each is best at. The public side contributes the site for construction of the new power plant so as to take full advantage of already existing factors such as land it already owns, network utilities, lignite supply infrastructure, water supply, transport infrastructure, and the like, all of which will then be available to support the new Kosova e Re Power Plant. The government also takes the risks associated with lignite supply, water supply, certain environmental matters relating to ash and gypsum disposal at the mines, and guarantees for offtake of power. The private sector contributes its skills in efficient, cost-effective management during construction and operation of the facility, and its abilities to raise cost effective financing.

FREQUENTLY ASKED QUESTIONS

Kosova e Re Power Plant Project is structured in such way that the private sector party will be able to return its investments during the initial 20-year operational phase of the project, subject to strict performance standards. In this way, the government gets the benefit of improved service delivery, new technologies, and innovative financing provided by the private sector.

While there are many different structures available for PPP, in the case of Kosova e Re Power Plant, as in the case of Prishtina International Airport, the private sector will operate the facility for 20 years, then transfer it back to the public sector at no cost at the end of the Power Purchase Agreement (PPA) term. Kosova e Re Power Plant will be designed and constructed for a 40-year operational life, so the government will be able to operate the plant for the remaining 20 years. During this period, Kosova e Re Power Plant would have already repaid its capital costs, so the future energy prices will be mainly based on operational and maintenance costs.

B. KOSOVA E RE POWER PLANT PROJECT

10. WHAT IS THE KOSOVA E RE PROJECT ABOUT?

The Government of Kosovo has recognized the need to additional power plant capacity to meet the long-term security-of-supply concerns present in Kosovo and as a matter of policy decided to involve the private sector in an infrastructure project that includes the development, design, construction, financing, ownership, operation and maintenance of Kosova e Re Power Plant. The Kosova e Re Power Plant Project and the Kosova e Re Power Plant Transaction are integral components of the Kosovo Energy Strategy.

The Transaction is for an investment in an electrical generation business. This Transaction is structured by creating a single sole-purpose generation company, GenCo. GenCo will have both contracted lignite supply from KEK Mining in the form of a Lignite Supply Agreement (LSA) and contracted electricity offtake, and thermal energy, to New Kosovo Energy Corporation (NKEC) for 100% of Kosova e Re Power Plant available capacity in the form of Power Purchase Agreement (PPA), anticipated Heat Supply Agreement and ultimately to KESCO and all other suppliers, via the Back-to-Back PPA.

All obligations of the Offtaker, under the respective Power Purchase Agreement, anticipated Heat Supply Agreement, as well as KEK Mining's obligations under the Lignite Supply Agreement will be guaranteed by the Government of Kosovo.

11. WHAT ARE THE MAIN PROJECT COMPONENTS?

The project has developed over time to take into account the new policies, economic and financial conditions as well as consideration of the project risk allocation profiles acceptable to bidders and their lenders in today's markets.

After careful consideration of many factors related to the preceding and the input of bidders, the transaction structure now is now comprised of only the power plant component as follows:

construction, operation and maintenance of a new lignite power plant, Kosova e Re Power Plant with an installed capacity of 500 MW, with the possibility for co-generation use of at least 10% its net capacity, grid connection works, carbon capture readiness, as well as ash and gypsum disposal sites.

12. WHO OVERSEES THE PROJECT?

The Government of Kosovo has established a Project Steering Committee (PSC), which is composed of the relevant ministers and independent regulators, for the purpose of selecting an investor for the Kosova e Re Power Plant Transaction.

The PSC is chaired by Minister of Economic Development (MED), with other members being from Office of Prime Minister (OPM), Ministry of Finance (MF), Ministry of Environment and Spatial Planning (MESP), Ministry of Trade and Industry (MTI), Ministry of Labour and Social Welfare (MLSW), Energy Regulatory Office (ERO), and Independent Commission for Mines and Minerals (ICMM).

On a day-to-day basis, the Project Implementation Unit (PIU) established under the Ministry of Economic Development (MED) manages with the KRPP project.

The project has also contracted transaction, legal, and technical advisers, and is also being supported by donor funded technical assistance.

13. HOW IS THE GOVERNMENT OF KOSOVO INVOLVING THE PRIVATE SECTOR IN DEVELOPING THE KOSOVA E RE POWER PLANT?

For the development of Kosova e Re Power Plant, the Government of Kosovo has decided to involve the private sector

FREQUENTLY ASKED QUESTIONS

in a two-stage competitive bidding process: 1) Pre-qualification of Bidders, and 2) Selection of preferred bidder based on response to the Request for Proposals.

From the time of release of the Call for Expression of Interest in 2006, the project has developed over time to take account of new policies (power plant size, and project components such as inclusion of mining and existing power plants assets in the transaction), economic and financial conditions as well as consideration of the project risk allocation profiles acceptable to bidders and their lenders in today's markets.

The Request for Proposal was finally issued to the three remaining Pre-qualified bidders in 2014. The Request for Proposal proposed a two-phase process:

- **Phase 1:** Bidders were required to bid their fixed equity Internal Rate of Return (IRR), plus a Capped Development Costs component. The determination of the preferred Bidder is based on the Bidder who submitted the lowest conforming Equity IRR and Capped Development Cost as part of their Phase 1 Financial Proposal. The Preferred Bidder will be responsible for achieving a Commercial Closing; and

From a list of three remaining pre-qualified bidders, only one bidder responded to the Request for Proposal. After careful evaluation of submission, which included a number of conditions, in 2015 this bidder was granted status as the preferred bidder and a call for the execution of a Memorandum of Understanding was made to reflect the results of negotiations that lead to achievement of Commercial Closing (execution of Project Agreements).

- **Phase 2:** after the Commercial Closing, the private partner will then be responsible for conducting an international tender (conducted under procedures consistent with the rules and policies of the IFIs) for an EPC and LTM contractor under the supervision of Government, arranging debt financings, and satisfying all conditions precedent and all other necessary activities for the achievement of Financial Close. Generally, the electricity tariffs will be established under a methodology that takes into account for the actual costs of the EPC, LTM, and O&M contract prices, connections works contract price, actual financing costs and other allowable costs, such that the IRR will remain constant.

14. WHO IS THE PRIVATE PARTNER THAT IS GOING TO BUILD THE POWER PLANT?

ContourGlobal PLC (CG), a US founded company, and now a London Stock Exchange listed company, specialized in acquiring and developing wholesale power generation with long-term contracts diversified across fuel types and geographies.

CG was involved in the Kosova e Re Power Plant Transaction since 2006, initially as part of ENEL / SENCAP (PPC / CG), and later in 2010 as a member of the PPC/CG consortia.

CG's portfolio includes 4.1 GW in operation, spread across 69 power plants utilizing a wide range of fuel types, technology and equipment that are located in 19 countries on 3 continents.

For development of the Kosova e Re Power Plant, CG will provide 30% (approximately 400 million Euro) of total project cost via project-level equity commitments at agreed IRR of 18.5%, and will be responsible for arranging remaining debt financing.

15. WHAT IS THE PROJECT TIMELINE AND WHAT ARE THE NEXT MAIN MILESTONES?

With achievement of Commercial Closing (execution of all Project Agreements) the Kosova e Re Power Plant Project enters Phase II – Financial Closing. Financial Closing is the last stage before commencement of construction.

The main milestones of this Phase II include:

- Selection of EPC and LTM Contractor, and Connections works Contractor
- Completion of Supplemental EIA/ESIA Study
- Application and granting of all GenCo's Permits and Licenses

- Satisfaction of all Conditions Precedent
- Execution of Lenders' Direct Agreement
- Financial Closing/ Site Transfer Date.

Upon completion of Financial Closing the project will enter the final Development & Operations Phase.

The main milestones of the Development & Operations Phase include:

- Construction Start Date (KRPP) within 30 Calendar Days of the Financial Closing
- Construction and Commissioning Period within 52 months
- Commercial Operation Date (COD) in accordance with the Power Purchase Agreement.

At the end of the 20-year term of the Power Purchase Agreement, the Kosova e Re Power Plant is transferred to the Government of Kosovo at no cost.

16. WHAT ARE THE PROJECT CONTRACTUAL ARRANGEMENTS?

The transaction is structured by creating a single sole-purpose generation company, GenCo. GenCo will enter into a number of Project Agreements with Government of Kosovo and entities owned by Government of Kosovo, such as KOSTT, Korporate Energjetike e Kosovës (KEK), Ibër-Lepenci water company (IL).

Under these agreements, the Government of Kosovo will issue payment and performance guarantees of the Offtaker (NKEC) obligations to GenCo under the PPA; KEK Mining's obligations under the LSA: damages arising under the Ash & Gypsum Disposal Agreement; and the non-supply of water under the Water Supply Agreement.

The private partner sponsors (ContourGlobal companies) will be required to enter into a Sponsor Support Agreement with the Government of Kosovo to address their commitment to provide equity in a timely manner, to provide financial security during development of Kosova e Re Power Plant and to address certain restrictions on the transfer of shares, amongst other issues.

GenCo entered into the following contracts with respect to Kosova e Re Power Plant: the Site Transfer Agreement, Implementation Agreement, Lignite Supply Agreement, Sponsor Support Agreement Power Purchase Agreement, Water Supply Agreement, Grid Connection Agreement, and Ash and Gypsum Disposal Agreement.

At Commercial Closing the following project agreements have been executed:

No.	Agreement	No.
1	Implementation Agreement (IA)	GenCo / GOK
2	Sponsor Support Agreement (SSA)	GenCo / GOK
3	Site transfer Agreement (STA)	GenCo / KEK
4	Power Purchase Agreement (PPA)	GenCo / NKEC
5	Lignite Supply Agreement (LSA)	GenCo / KEK
6	Water Supply Agreement (WSA)	GenCo / Iber Lepenci
7	Grid Connection Agreement (GCA)	GenCo / KOSTT
8	Ash and Gypsum Disposal Agreement (AGDA)	GenCo / KEK

It is anticipated that GenCo may in the future also contract for heat offtake to Termokos in the form of a Heat Supply Agreement.

Apart from these Agreements GenCo will be required to seek the necessary permits, consents and approvals for development and construction of the Kosova e Re Power Plant plant at respective institutions as defined by relevant legislation. The current licensing requirements that are applicable to GenCo include (but are not limited to):

- License for generation of electricity, Energy Regulatory Office (ERO)

- Environmental Authorization, Ministry of Environment and Spatial Planning (MESP)
- Environmental Permit, MESP
- Integrated Environmental Permit, MESP
- Water Permit, MESP
- Construction Permit, MESP
- Usage Permit, MESP.

According to Kosovo Law No 03/L-043 on Integrated Prevention and Pollution Control (IPPC), GenCo will have to apply for an IPPC permit which harmonizes the environmental standards in Kosovo for integrated pollution prevention and control with those in the EU. In accordance with Article 20 of this law, GenCo will have to submit a Best Available Techniques Assessment to the Ministry of Environment and Spatial Planning to determine that the technologies and techniques proposed to be used by GenCo (and their EPC & LTM Contractor, and Connection works Contractor) are consistent with measures to prevent, minimize and control pollution and based on the BREFs.

17. WHO IS GOING TO PROVIDE LIGNITE FOR THE NEW POWER PLANT?

Kosovo Energy Corporation (KEK) Mining will have the exclusive rights to explore a defined area of the lignite field with sufficient reserves to provide lignite to meet its commitments under the Lignite Supply Agreement (LSA) and exclusive exploitation rights granted to develop and operate defined areas of the field to meet the demand for lignite from GenCo's licensed generation at Kosova e Re Power Plant, together with TPP Kosovo A and TPP Kosovo B for the projected useful economic lives of each plant. KEK Mining will have the obligation to supply all generators on an equal priority basis and the prices of lignite must be set and maintained on a non-discriminatory basis across all purchasers of lignite.

KEK Mining will take responsibility for all lignite mining elements related to Kosova e Re Power Plant, including mine development, capital investment, performance of all environmental, social obligations and health and safety, licensing and permitting, setting of lignite prices, performance of contractual supply obligations, and generally carrying out all operations and mining-related obligations accordance with applicable requirements.

KEK Mining will assume responsibility for all environmental obligations associated with the area covered by its Mining License.

It is recognized by the Government that GenCo requires assurances that KEK Mining will have all necessary capabilities to develop and implement the mine development plan and carry on all obligations and activities of the mine in a manner that will allow it to meet all of its obligations. KEK Mining's supply obligations toward GenCo will be guaranteed by GoK.

To help ensure GenCo's confidence that KEK Mining will be a sustainable long-term fuel supplier to the Kosova e Re Power Plant (together with other power plants), KEK will utilize support of an international mining consultant to prepare the Mine Development Plan for the new mine.

KEK mining, with support from an international mining consultant, is responsible for:

- a) updating KEK's Mine Development Plan to take into consideration the necessary mine developments required to supply the Kosova e Re Power Plant for its useful life, together with the supply of other power plants and lignite consumers in Kosovo;
- b) development of a Mine Financing Plan (which shall, amongst other things address financing of the necessary capital costs required for implementation of the updated Mine Development Plan);
- c) Lignite Pricing Report, which will recommend lignite price level that will provide for sustainable operations of KEK Mining;
- d) assistance in the timely attainment of an extension of KEK Mining's existing mining license and modification of such

license to reflect the updated Mine Development Plan and attainment of all other necessary permits, licenses and approvals; and,

- e) planning and implementation of all measures necessary to fulfil KEK Mining's environmental, social and health and safety obligations including ESA/ESIA and EMPs related to mining elements, and resettlement and relocation obligations.

The Mine Development Plan will be finalized in 2018.

18. WHAT KIND OF GUARANTEES IS THE GOVERNMENT OF KOSOVO PROVIDING TO THE PRIVATE PARTNER, AND DO THESE GUARANTEES REQUIRE PARLIAMENT APPROVAL?

The Government of Kosovo will issue payment and performance guarantees of the Offtaker's obligations to GenCo under the Power Purchase Agreement (PPA), KEK Mining's obligations under the Lignite Support Agreement (LSA), damages arising under the Ash & Gypsum Disposal Agreement, the non-supply of water under the Water Supply Agreement (WSA).

It is anticipated that guarantees issued by the Government of Kosovo will be further supported by International Development Agency (IDA) in the form of guarantees covering sovereign risk elements, including a Government of Kosovo breach of contract.

Issuing of such guarantees means that the Republic of Kosovo is undertaking contingent liabilities, and this is subject to being ratified by two thirds (2/3) vote of all deputies of the Assembly (*Constitution of the Republic of Kosovo, Article 18. Ratification of International Agreements*).

19. WHO IS GOING TO FINANCE CONSTRUCTION OF THE POWER PLANT?

CG will provide 30% (approximately 400 million Euro) of total cost for development of Kosova e Re Power Plant via project-level equity commitments, and will be responsible for arranging remaining part via debt financing. GenCo will be expected to immediately begin the process of identifying and soliciting interest potential project international lenders, including International Financing Institutions (IFIs), Export Credit Agencies (ECAs), Ex-Im Banks, commercial lenders, and potential supplier credit institutions. It is understood that potential ECAs, Ex-Im Banks and supplier credit institutions will likely be linked to the winning Phase 2 EPC & LTM Contract, Connection works Contract bidder.

The IFIs have each expressed their interest to, in principle, provide financial support for the Kosova e Re Power Plant project to be applied for the benefit of the successful Bidder and their lenders to aid in mitigating certain financial risks associated with the Kosova e Re Power Plant Project.

In January 2012, the World Bank released the study "Kosovo: Kosovo Power Project – Report of the SFDC External Expert Panel to the World Bank", which provided the basis for World Bank Group to support the KRPP Project based on economic, environmental, social and other criteria of the World Bank. On March 13, 2012, the Vice President of the World Bank's Europe and Central Asia Region issued an "in principle" Statement of Support letter to Kosovo's Prime Minister. The "in principle" letter outlines the World Bank Group entities' willingness to consider providing financial support to the Kosova e Re Power Plant Project, based on the finding of the External Expert Panel. On April 13, 2012, the World Bank issued a letter titled "World Bank Group Statement of Support for a Partial Risk Guarantee" to Kosovo's Minister of Finance. This letter provides a statement from the World Bank Group declaring that the following World Bank Group entities are prepared, in principle, to consider providing various types of financial support for the Kosova e Re Power Plant Project to the benefit of international investors:

- International Finance Corporation ("IFC"): to provide funds from its own account and assist the successful Bidder in mobilizing additional IFIs, commercial banks and other lenders, where possible and subject to those potential lenders' criteria;
- Multilateral Investment Guarantee Agency ("MIGA"): to provide an investment guarantee to eligible foreign investors

and/or lenders, which would guarantee risks including: transfer restrictions, expropriation, breach of contract by GoK (including payment obligations) and war and civil disobedience risks; and,

- International Development Agency (“IDA”): to provide a guarantee, covering sovereign risk elements, including in particular, a GoK breach of contract.

The Republic of Kosovo became the 66th EBRD member state in December 2012. As such the Kosova e Re Power Plant Project is eligible for EBRD support, including financial support. EBRD has expressed an in principal interest in providing financial support for the Kosova e Re Power Plant Project. On 9 April 2013, EBRD has issued an in principal support letter for the Kosova e Re Power Plant Project to the Kosovo Minister of Finance. Since December 2012, members of EBRD have actively been participating in meetings with the PIU and Transaction Advisors, in effort to ensure the RfP and Project Agreements are structured in accordance with EBRD standards.

20. WHO IS GOING TO CONSTRUCT THE KOSOVA E RE POWER PLANT?

GenCo will be responsible for conducting an international tender for Engineering-Procurement-Construction (EPC) and Long-Term Maintenance (LTM), and Connection works Contractors.

Such tenders must be conducted under the supervision of the Government of Kosovo and the tender process must adhere to Applicable Standards and IFI procurement standards. GenCo will conduct a single tender process and select a single winning Contractor who will provide both EPC and LTM services, and a separate tender for Connection works.

21. WHO IS GOING TO OWN THE KOSOVA E RE POWER PLANT?

Kosova e Re Power Plant will be owned by the generation company GenCo. For the initial 20-years, or the duration of the Power Purchase Agreement (PPA), GenCo will be owned by the winning Bidder (ContourGlobal). At the end of the PPA term, GenCo will be transferred to the Government of Kosovo at no cost.

22. WHO IS GOING TO OPERATE THE KOSOVA E RE POWER PLANT?

For the initial 20-years, or during the duration of the Power Purchase Agreement (PPA), GenCo will be operated by the private partner (ContourGlobal). Following the transfer of GenCo to the Government of Kosovo, it will be under the sole discretion of the Government of Kosovo to decide who will operate Kosova e Re Power Plant.

23. WHEN WILL CONSTRUCTION OF THE NEW POWER PLANT BEGIN AND HOW LONG WILL IT TAKE?

Following achievement of Commercial Closing on 20 December 2017, the development of the Kosova e Re Power Plant is subject to the achievement of Financial Closing in Phase 2 of this transaction, the successful attainment of all relevant licenses and permits as required by applicable legislation, and the successful acquisition by GenCo and GenCo's contractors of all GenCo consents as defined in the Power Purchase Agreement.

GenCo must achieve the Construction Start Date within 30 Calendar Days of the Financial Closing / Transfer Date, and the plant must achieve Commercial Operation Date within 52 months after the transfer date. Special arrangements will apply for the periods where Kosova e Re Power Plant is undergoing testing for commercial operation and from the start of commercial operation of Kosova e Re Power Plant.

Should GenCo fail to meet either Commercial Operation Date, liquidated damages will be applied as specified in the Power Purchase Agreement.

24. WHO WILL OVERSEE THE CONSTRUCTION AND ACCEPTANCE OF THE POWER PLANT?

It is a requirement that the construction of Kosova e Re Power Plant be undertaken under a “turnkey” EPC contract methodology and that the development works will be based on the indicated Functional Specifications of the Kosova e Re Power Plant. The Government will appoint an Independent Engineer to monitor and witness the development and testing of the Kosova e Re Power Plant on behalf of the GOK / NKEC (Offtaker). Government of Kosovo will be liable for the costs of the Independent Engineer as outlined in the Implementation Agreement.

25. WHEN CAN WE EXPECT THE FIRST ELECTRICITY TO BE DELIVERED?

The Commercial Operation Date of the Kosova e Re Power Plant is linked to:

1. Achievement Commercial Closing (execution of all Project Agreements) – completed.
2. Achievement of Financial Closing (conducting an international tender for an EPC and LTM contractor, Connection works Contractor, arranging debt financings, and satisfying all conditions precedent)
3. Construction Start Date within 30 Calendar Days of the Financial Closing / Site Transfer Date
4. Completion of construction and performance tests and within 52 months from the Construction Start Date.

Based on the above, the best estimate for first supply of electricity to be delivered from Kosova e Re Power Plant is in middle of year 2023.

C. KOSOVA E RE POWER PLANT FACTS

26. WHAT IS THE CAPACITY OF THE KOSOVA E RE POWER PLANT?

The Kosova e Re Power Plant (KRPP) comprises a new single unit lignite-fired power plant with a gross capacity of 500 MW or net capacity of 450 MW, located on a site next to the existing TPP Kosova B, in Obiliq, Kosovo. The new 500/450 MW unit capacity is suitable for integration to the existing transmission network with respect to grid capability and grid stability.

The new unit will provide baseload energy and grid stabilization, and will be a strategically critical asset as it will cover nearly half of all electricity demand in the country. The new unit will be cogeneration ready and in the future, the unit will also provide thermal energy for the Prishtina central heating system, and possibly to Fushë Kosova and Obiliq once the network has been expanded.

27. WHAT KIND OF TECHNOLOGY WILL BE IMPLEMENTED IN THE KOSOVA E RE POWER PLANT?

The Request for Proposal for Kosova e Re Power Plant specifies both environmental and technical standards that the new plant must meet.

The planned unit will be built as a “supercritical” power plant, representing best available technology, and it is required to meet the EU IED emission standards with state-of-the-art combustion and air quality control systems. Net efficiency of the new plant is expected to be greater than 40.0%.

Within the technical portion of those standards, GenCo can use either of two of the new technologies: PCC (Pulverized Coal Combustion) generation technology, or CFBC (Circulating Fluidized Bed Combustion) generation technologies. It is up to GenCo, during what is known as Phase 2 of the project to determine which approach to take; either way, there should be sufficient space at the designated construction site to accommodate either generation technology for Kosova e Re Power Plant.

In addition to the combustion technology standards, Kosova e Re Power Plant will also be subject to CCR requirements (Carbon Capture & Reuse). It should be noted that the indicative layout providing space for carbon capture extraction and sequestration may vary from one design to another. It will be up to GenCo, with its EPC and LTM Contract bidders, to propose alternative layouts should their preferred designs vary from the indicative layout.

Taken together, these requirements will ensure that KRPP utilizes the best possible technology, and is run in the best possible manner, all with the goal of increasing power supply, while minimizing risks to the environment, and to the health of nearby living communities.

28. WHAT IS THE EXPECTED EFFICIENCY OF KOSOVA E RE POWER PLANT?

The minimum thermal efficiency requirements defined for Kosova e Re Power Plant comply with the European Union’s Industrial Emissions Directive (“IED”) Best Available Techniques (“BAT”) requirements. Net efficiency is the level of fuel and water needed to run a plant measured against the level of output of that plant.

Kosova e Re Power Plant, a single unit with gross capacity of 500 MW, will be required to achieve at least a 40.0% Net Electrical Efficiency standard. The approved minimum efficiency thresholds are set forth in the technical specifications for the Kosova e Re Power Plant.

Higher efficiency means that less lignite will be consumed, leading to less emissions. However, higher efficiency is achieved with the deployment of special alloys that can tolerate more demanding operating parameters (higher temperatures and pressures) that translate into higher construction and maintenance costs. When defining the net efficiency of the new plant, considerations were also given to demonstrate cost-effective technology to avoid unnecessary increases in the electricity tariff due to higher capital investment cost.

For comparison, during 2016, the net efficiency of TPP Kosovo A was around 27.2% and the net efficiency of TPP Kosovo B was around 33.4%.

29. HOW MUCH ELECTRICITY WILL THE KOSOVA E RE POWER PLANT GENERATE?

Kosova e Re Power Plant will have an installed capacity of 500 MW, called gross capacity. The internal processes, such as running various pumps, conveyors, mills, air quality control system, lighting, instrumentation, and losses usually consume 10% of the total gross capacity, which is called the internal power plant consumption. The remaining 450 MW is available for dispatch to the network, which is called the net capacity, or the capacity that can be declared as available to the network.

Kosova e Re Power Plant will be able to operate with some degree of flexibility, between the technical minimum of 180 MW up to 450 MW. The capacity at which the plant operates during each hour determines the power output or energy. This is measured in MWh. In cogeneration mode of operation, the unit can provide about 200 MW thermal power, but at 10% lower electrical power output.

For illustrative purposes: if the plant operates at 450 MW capacity over one hour it generates 450 MWh or if it operates 450 MW capacity over 24 hours then the equations look $450 \times 24 = 10,800$ MWh.

To put this in the context of Kosovo, the country's annual demand is around 5,500 GWh or 5,500,000 MWh. If KRPP would run at the planned average equivalent of maximum load operation during the year, it would generate $450 \text{ MW} \times 7,687 \text{ hours} = 3,459,150$ MWh, enough to meet 63% of the total demand.

This calculation, however, includes periodic unit inspections, annual maintenance, overhauls that occur every 5 years and major overhauls every 10 years. During such overhaul periods the plant is out of operation for certain number of months. In best year scenario of maximum operation and no maintenance or overhaul periods, meaning the plant is continuously delivering electric energy, KRPP will be able to generate enough power to meet about 64.4% of annual average Kosovo's energy needs. With growing demand for energy over time, the proportion of power generated by KRPP to meet Kosovo's energy demand will drop.

Kosova e Re Power Plant is also obliged to dedicate 10% of its net electrical capacity for thermal energy (for space heating). This means that during the heating season in winter months, depending on specific heat demand requirements, TPP Kosova e Re has the potential to deliver equivalent thermal power of about $200 \text{ MW}_{\text{th}}$.

30. HOW MUCH FUEL WILL THE KOSOVA E RE POWER PLANT CONSUME AND HOW DOES THAT STAND IN COMPARISON TO EXISTING POWER PLANTS IN KOSOVO?

Kosova e Re Power Plant with supercritical technology and efficiency of more than 40% will consume less lignite as currently consumed by TPP Kosovo A and TPP Kosovo B. Lignite for Kosova e Re will be supplied from a near mine operated by KEK Mining.

The final lignite consumption is one of the parameters that will be determined by EPC Contractors in Phase 2, however, based on the defined minimum requirements, the lignite consumption is expected to be in the range of 1.05 to 1.10 t / MWh (net). The total annual lignite demand depends on the number of hours the unit will operate during the year, which is based on calculations that the plant will consume 3.8 – 4.0 million t of lignite per year.

For comparison, the lignite consumption during year 2016 was 1.73 t/MWh (net) for TPP Kosovo A, and 1.40 t/MWh (net) for TPP Kosovo B.

The need for a higher efficiency plant is important as it impacts the final cost of production by reducing operational cost of the power plant, emissions to the environment, and amounts of ash to be deposited.

31. HOW MUCH WATER WILL KOSOVA E RE CONSUME AND IS THERE ENOUGH WATER FOR THIS POWER PLANT?

Kosova e Re Power Plant will obtain its supply of raw water from Ibër-Lepenc under the Water Supply Agreement. The existing Kosovo B water supply from the Ibër-Lepenc canal is delivered by gravity over a distance of about one km from the main canal to the power plant. Ibër-Lepenc will undertake arrangements to meter the supply to KRPP, at or near the Water Delivery Point as specified in the Water Supply Agreement.

Minimization of water consumption is an important aspect of the plant's design. Kosova e Re Power Plant uses supercritical technology, efficiency of more than 40%, and state-of-the-art water treatment, all of which will enable the plant to consume less water as currently consumed by TPP Kosovo A and TPP Kosovo B.

Raw water treatment will be required for various purposes and to satisfy the various needs of the Kosova e Re Power Plant, including, but not necessarily limited to, the following:

- potable water
- water steam cycle demineralized makeup
- firefighting water systems
- cooling water make-up
- flue gas desulphurization (if required)
- ash handling systems
- lignite handling area dust suppression
- other general service water purposes (e.g. hose down water).

GenCo should undertake treatment of the raw water to meet these requirements, and select equipment to provide appropriate treatment and control to the needs of the Kosova e Re Power Plant.

The final raw water consumption is one of the parameters that will be determined by EPC Contractors in Phase 2. However, based on the preliminary study results, total power plant raw water requirements are planned to be about 2.16 m³ / MWh (net) in unit operation at nominal capacity. For comparison, water consumption of TPP Kosovo B in year 2016 was around 2.406 m³ / MWh (net), and this is due to fact that much of the water is not treated and reused in the system.

The feasibility study for the Protection of Ibër Lepenci Canal Kosovo (Volume A, Main Report, 2015, egis eau) provides sufficient data for raw water availability and raw water Kosova e Re Power Plant supply during life time operation. In fact, this study has confirmed water balances from previous studies (2008 and 2014) that water capacity at the end of existing main Ibër canal is sufficient to meet raw water demand for both existing and new lignite thermal plant capacities.

D. ENVIRONMENTAL IMPACTS OF KOSOVA E RE

32. WHAT ARE THE ENVIRONMENTAL STANDARDS FOLLOWED FOR THE DESIGN AND OPERATION OF KOSOVA E RE POWER PLANT?

The government has made a decision on the minimum thermal efficiency requirements necessary to comply with the European Union's Industrial Emissions Directive ("IED") Best Available Techniques ("BAT") requirements.

The KRPP plant will be required to achieve at least a 40.0% Net Electrical Efficiency standard (applied to all available design categories for the Kosova e Re Power Plant facility).

Requirements to control the level of oxides of nitrogen ("NO_x"), Sulphur dioxide ("SO₂"), and particulate matter ("dust") released into the atmosphere are provided in the IED as applicable to existing and new plants burning solid, liquid or gaseous fuels. These requirements specify levels that are dependent on the age of the power plant. In the context of the IED, the KRPP Facility is categorized as a new plant which is solid-fuel fired and with thermal input greater than 300 MWth. Therefore, to enable compliance with the IED, GenCo must ensure the plant complies with the following emission limit values:

BAT-AELs	Fluidized bed boiler		PC boiler	
	Yearly average	Daily average	Yearly average	Daily average
Pollutant	mg/Nm ³	mg/Nm ³	mg/Nm ³	mg/Nm ³
SO ₂	20 - 75	25 - 110	10 - 75	25 - 110
NO _x	50 - 85	80 - 125	65 - 85	80 - 125
Dust	2 - 5	3 - 10	2 - 5	3 - 10

Commission implementing decision (EU) 2017/1442 of 31 July 2017, establishing best available technique (BAT) conclusion, under Directive 2010/75/EU of European parliament and of the Council, for large combustion plants.

Directive 2009/31/EC on the geological storage of carbon dioxide amended the LCPD to require all combustion plants granted a license after 23 April 2009 to assess and where feasible to make suitable space available on the site for the capture and compression of CO₂. Kosova e Re Power Plant needs to be Carbon Capture ready. The KRPP site provides adequate space for the installation of CO₂ extraction technology to enable compliance with Directive 2009/31/EC.

33. HOW WAS THE SITE SELECTED FOR CONSTRUCTION OF KOSOVA E RE POWER PLANT?

Requirements for selecting appropriate plant sites include the following:

- Unoccupied free land or able to be easily vacated
- Preferably zoned for industrial activity
- Relatively flat topography
- Reasonable soil conditions, no seismic faults nearby, not prone to flooding
- Downwind from population centers and no large population centers in immediate vicinity
- No natural parks, wildlife and archaeological sites nearby
- Not highly visible
- Satisfactory economic evaluation.

A prefeasibility study in 2006 initially identified three sites: Next to TPP Kosovo B, Bivolak, and Grabovc i Poshtëm. In early 2007, another potential site next to TPP Kosovo A was added, replacing Grabovc i Poshtëm, which was found to be unsuitable.

The selected construction site for Kosova e Re Power Plant is adjacent to the existing TPP Kosovo B. The site is brownfield, and located approximately 1.5 kilometers west of Obiliq and 9 kilometers west of Prishtina.

FREQUENTLY ASKED QUESTIONS

The site was selected as to take full advantage of power-related infrastructure that is already existing there such as and already owned by KEK, proximity to KOSTT's Kosovo B 400/220 Sub Station, proximity to Ibër-Lepenci water canal, existing road and railways network, and the like.

The plant layout will be arranged to:

- Ensure safety and efficiency of operation and maintenance
- Minimize on-site traffic
- Consider the direction of the prevailing winds in terms of:
 - o dust impact from coal handling yard on sensitive equipment and buildings
 - o hot air circulation from cooling towers, drift and plume
 - o provision of clean air intake for buildings, for current and future equipment
- Optimize potential synergies with the existing Kosovo B power station via shared services
- Facilitate response by emergency teams such as firefighting
- No impact on Kosovo B operation and maintenance activities
- No impact to Air Traffic (chimney)
- KRPP connection to the heat exchanger located on or near Kosovo B site.

The site is estimated to have sufficient space for carbon extraction. To the extent that a future government decision is made to install carbon capture technology at KRPP, sufficient carbon storage reservoirs and transportation infrastructure will need to be identified and developed.

34. HOW ARE ENVIRONMENTAL AND SOCIAL IMPACTS ASSESSED FOR THIS PROJECT?

An Environmental and Social Impact Assessment (ESIA) for the proposed Kosovo e Re Power Plant (KRPP) was prepared in 2014 to identify the environmental and social risks, impacts and opportunities related to the construction and operation of the KRPP, which at that time was proposed to have a generation capacity of 600MW. The ESIA recommended corresponding mitigation measures to anticipate and avoid, or where avoidance is not possible, minimize, and, where residual impacts remain, compensate for or offset such impacts. The ESIA also considered other infrastructure associated with the KRPP, particularly the options for the mine that could supply lignite to the power plant and relevant elements of the Iber-Lepenc canal, which supplies water to multiple users and would supply cooling water to KRPP.

The ESIA was prepared in line with the requirements of international financial institutions (IFIs), namely the World Bank's environmental and social Operational Policies (OPs), the International Finance Corporation's (IFC) environmental and social Performance Standards (PSs) and the European Bank for Reconstruction and Development's (EBRD) environmental and social Performance Requirements (PRs). The ESIA also considers applicable environmental and social legislation from the Republic of Kosovo and the European Union Directives.

Preparation of the ESIA involved community and stakeholder engagement, through disclosure of project-related information and consultation with national stakeholders and local communities on matters that directly affect them.

Inputs to the ESIA included the Strategic Environmental and Social Assessment (SESA) for the proposed and much larger Kosovo C Project (2,000 MW), which was prepared between September 2007 and mid-2008.

The ESIA was prepared in two phases:

- **Phase 1** – Scoping Phase, primarily focused on identifying the impacts to be assessed, how to assess them, and which of the impacts are most significant and important, as well as consideration of the geographical area of influence for the environmental and social parameters. This phase included public consultations on the Scoping

Report.

- **Phase 2** – Environmental and Social Impact Assessment – based on the findings of the Scoping Phase and consultations – focusing on the actual impact assessment and the identification of proposed environmental and social mitigation and monitoring measures to inform the development of specific management plans in the future.

The extensive consultation process undertaken for the ESIA sought to identify community concerns and determine environmental and social priorities for the lignite mining and power generation development, and in particular to:

- Ensure that key stakeholders were identified
- Collect public opinions/views/perception on the current state of the environmental and social issues and expectations for the future
- Provide information on the character, progress and impacts of the project to key stakeholders
- Give stakeholders the opportunity to influence the policy priorities that affect this process
- Disclose the Scoping Report and draft ESIA report to stakeholders and affected population for comments to be included in the final ESIA.

The main consultation activities performed for the ESIA were the following:

- Public consultations on and public disclosure of the Terms of Reference in July 2012
- Identification of key stakeholders as part of the Scoping Report
- Public disclosure and public hearing for the Scoping Report in October 2014
- Socio-economic survey of 2,050 persons, as well as focus groups in the villages of Obiliq municipality in 2014 (about 20% of the affected population in the direct and indirect area of influence)
- Consultations on the draft ESIA, which are to be conducted one month after public disclosure of the draft document.

The ESIA is currently being updated (2017-2018) to reflect the currently planned capacity of 450MW. The updated ESIA does not address impacts from lignite mining operations, which require assessment by a separate study.

35. WHAT ARE THE ENVISAGED ENVIRONMENTAL AND SOCIAL PRESSURES DURING CONSTRUCTION OF THE KOSOVA E RE POWER PLANT?

Potential negative impacts during construction include dust, noise, disruptions in traffic patterns, and risk of injury of construction workers. These impacts are temporary and limited to the construction phase, and will be mitigated with proper construction supervision and oversight so that impacts are minimal.

Potential positive impacts include increased job opportunities during construction.

36. WHAT ARE THE ENVISAGED ENVIRONMENTAL AND SOCIAL IMPACTS DURING OPERATION OF THE KOSOVA E RE POWER PLANT?

A major positive benefit of operation of the new plant includes improved air quality and public health from more efficient plant operations and removal of air emissions with improved filters and combustion technologies, as well as measures to comply with IED pollution control standards. Additional positive benefits include increased government revenue and job opportunities. A major negative impact is anticipated from expansion of mining operations which will require the resettlement of people. However, planned mitigation could help alleviate this impact with special provisions in a Resettlement Action Plan and financial or employment support through the Community Development Fund and Work Accommodation Strategy.

Specific environmental impacts from power plant operation include:

FREQUENTLY ASKED QUESTIONS

- Fugitive dust transmission from lignite transport and handling (Insignificant impact with planned dust control mitigation)
- Air emissions such as SO_x, NO_x, CO, CO₂, particulate matter (PM), some heavy metals, and small concentrations of dioxins from lignite combustion (Minor impact of SO_x with desulfurization and other planned emission control mitigation measures; and Major positive impact on air quality due to more efficient operations and emission removal methods)
- Emission of germs such as bacteria and legionella from cooling towers (Insignificant impact with planned mitigation)
- Water pollution from power plant wastewater (minor impact with planned wastewater treatment mitigation)
- Slag, ash and gypsum waste by-products from power generation (minor impact with planned mitigation)
- Water pollution from mine wastewater (moderate impact with mitigation, including water quality monitoring)
- Less water available for water supply to local settlements (Insignificant impact with mitigation)
- Biological habitat loss due to mining (Insignificant impact with mitigation)
- Disturbance of Mosque and KLA Martyrs Monument in Hade (Minor to Insignificant impact if moved to alternate locations)
- Disturbance of Mexhuaneeve and Nicaj botanic monuments/trees (Insignificant impact with preservation efforts)
- Loss of land use and land stability due to coal mining (Moderate impact with rehabilitation and other mitigation measures)
- Soil and water pollution from mining (Minor impact with mitigation)
- Noise from machinery in mine and power plant (Minor impact with mitigation)
- Risk of exposure to hazardous materials, burning, and contaminated soils near mining operations (Insignificant impact with mitigation).

Specific social impacts include:

- Improved health due to improved air quality from more efficient emission removal measures (major positive impact)
- Restrictions on building in settlements near mining areas (minor impact with phased in approach of restrictions as mitigation)
- Increased local and national government revenue (major positive impact)
- Increased job opportunities with expanded mining and power plant operations (minor positive impact)
- Risk of inflation with new job opportunities (minor impact with Work Accommodation Strategy and other planned mitigation)
- Physical displacement of approximately 442 and 835 persons (as noted in the 2014 ESIA), depending on the mine variant and with or without KRPP (including a buffer zone of 250 meters). (Major negative with resettlement plan)
- Establishment of a Community Development Fund (moderate positive impact)
- Impact on food security of some local residents (minor impact with mitigation).

37. WHAT TYPE OF WASTES AND EMISSIONS WILL BE PRODUCED DURING KOSOVA E RE POWER PLANT OPERATION?

Major wastes and emissions include air emissions, waste water emissions, and slag and ash waste by-products from power generation. Each is described below.

Air emissions. SO_x, NO_x, CO, CO₂ and particulate matter (PM) in the form of dust are the most significant emissions to air

from lignite combustion. Small quantities of other materials are also emitted, such as heavy metals, benzopyrene particles, hydrogen chloride and hydrogen fluoride, unburned hydrocarbons, non-methane volatile organic compounds, and in very small concentration dioxins and furans.

The new plant will reduce emissions to the atmosphere compared to the existing power plants, Kosovo B and especially Kosovo A, since Best Available Techniques (BAT) will be applied in line with the EU Industrial Emissions Directive (IED). The proposed KRPP will be designed in accordance with the principles and recommendations resulting from the guidelines of the EU on the application of BAT for large combustion plants.

Wastewater emissions. The following wastewater is estimated to be generated from the coal-fired power plant operation:

- Leachate from the coal stockyard (precipitation, water used for dust suppression)
- Waste water from chemical treatment of water (ion exchanger regeneration)
- Waste water from the cooling system
- Oily wastewater from the boiler room and turbine area
- Waste water from flue gas treatment (desulphurization)
- Water from washing boiler, air preheater and similar
- Sanitary wastewater
- Precipitation water from the power plant working surfaces.

All streams of wastewater will be controlled and release into the environment will take place only after analysis and appropriate treatment of water to be released.

Waste and by-products from power generation. Slag and ash from the proposed KRPP are expected to be hydraulically transported to the excavation area of the former Mirash mine where they are currently disposed of. The final contours of the filled area will be covered by overburden material and then re-cultivated, providing about 119 hectares that can be used for agricultural purposes, construction of tourist settlements, and/or recreation centers. Gypsum and part of the ash will be used as commercial products (in cement and similar industries).

38. HOW MUCH CO₂ WILL KOSOVA E RE POWER PLANT RELEASE INTO ATMOSPHERE?

Kosova e Re Power Plant with installed capacity of 500 MW, with 40% net efficiency, for each 1 MWh it generates will release 948.1 kg CO₂ into the atmosphere.

39. WHERE WILL THE ASH AND BY-PRODUCT OF KOSOVA E RE POWER PLANT BE DEPOSITED?

Bottom ash (from the boiler plant) and fly ash (from the electrostatic precipitators) is to be transported in line with best available techniques not entailing excessive costs ("BATNEEC") guidelines, from the power plant site for storage at the former Bardh and Mirash mine voids according to the Ash and Gypsum Disposal Agreement.

It should be noted that the ash and gypsum disposal at the former Bardh and Mirash mine voids will be at new storage sites created for disposal of products from the KRPP Facility. Bardh and Mirash Mine is owned by KEK Mining and GenCo will be responsible for ash transport to the disposal site. The mode of storage is to be such as to ensure no risk of discharge to the surrounding environment during the life of the plant, in any case by the employment of an impermeable membrane to contain the ash. Onsite dry ash storage arrangements are to be sized to accommodate the output of each unit over a period of 24 hours of operation of the units at maximum output.

For selling of fly ash, the fly ash storage hopper should be configured to allow for gravity feed to wheeled transport vehicles.

FREQUENTLY ASKED QUESTIONS

Once an ash storage area is full it must be capped with clay and then landscaped to match the original features of the landscape.

Saleable quality gypsum (if produced by the selected process) should be collected from the flue gas desulphurization process (if PCC technology is selected) and transferred to onsite gypsum storage hopper(s), sized to accommodate a minimum of 24 hours production from KRPP for transportation to the Bardh and Mirash storage site, or potentially prior to transportation for sale.

In case of sales of the gypsum, it is recommended to have adequate on-site storages with a capacity of approximately 7 days. Such possibilities for sales of gypsum shall be identified by EPC & LTM Contract bidders in their proposals in Phase 2 of this transaction.

Gypsum should be disposed of in the former Bardh and Mirash mine voids according to the Ash and Gypsum Disposal Agreement. It should be noted that the ash and gypsum disposal at the former Bardh and Mirash mine voids will be at new storage sites created for disposal of products from the KRPP Facility.

40. WHO WILL BE IN CHARGE OF KOSOVA E RE DECOMMISSIONING ONCE IT REACHES THE END OF ITS COMMERCIAL OPERATION LIFE?

At the end of 20-year term of Power Purchase Agreement, the Kosova e Re Power Plant will be handed over to Government of Kosovo at no cost. Government of Kosovo will be able to operate the plant for additional 20 years before it will be required to decommission the plant. The cost of decommissioning will have to be borne by the Government of Kosovo, respectfully operator of the plant.

As a rule of thumb for lignite fired plants, the cost of decommissioning and site clean-up is approximately 15% of initial investment or around 150 - 200 million Euro. It will be good practice if during the last years of operation, the plant operator begins with accumulation of a Decommissioning Fund rather than relying on public funds or donors as it the case with decommissioning of TPP Kosovo A.

41. WHO IN KOSOVO CAN ENSURE THAT THE KOSOVA E RE POWER PLANT MEETS THE ENVIRONMENTAL PERFORMANCE STANDARDS?

For construction and operation of the Kosova e Re Power Plant, a number of environmental permits will be required, such as Environmental Authorization, Environmental Permit, Integrated Environmental Permit, Water Permit, Construction Permit, and Usage Permit.

All these permits are reviewed and issued by Ministry of Environment and Spatial Planning (MESP). The MESP and together with its units such a Kosovo Environmental Protection Agency (KEPA), are responsible for monitoring and evaluation to ensure compliance of permitted operator with conditions and of each permit.

Many potential lenders to the Kosova e Re Power Plant project are signatories to the Equator Principles. They provide a common framework for environmental standards to be adopted by the project finance industry and are based on the World Bank and International Finance Corporation sector-specific pollution abatement guidelines, and IFC environmental, health and safety guidelines and safeguard policies. GenCo must ensure compliance with the Equator Principles to the extent required by lenders. Equator principles may be an integral part of Applicable Standards if they are required by lenders.

E. ECONOMIC IMPACT

42. HOW WILL CONSTRUCTION OF THE KOSOVA E RE POWER PLANT AFFECT THE RELIABILITY OF ELECTRICITY SUPPLY IN KOSOVO?

Because of direct investments in the opening of Sibovc Southwest mine, maintenance and regular overhauls of units in TPP Kosovo A and TPP Kosovo B, investments in transmission and distribution network, revitalization of existing small hydropower plants, sector unbundling, privatization of distribution network and supply, reduction of technical and non-technical losses, favorable prices in the regional electricity market, and improved legal and regulatory framework, the power supply was stabilized greatly in comparison to initial years after the war when black-outs, load shedding, and diesel generators were a very common practice.

Even with these investments Kosovo remains net importer of electricity for as much as 10% of its demand and it faces huge problems in terms of securing the necessary capacities to cover peak demand, particularly in the winter, and in meeting the reserve capacity requirements of the power system.

Kosovo now faces new challenges:

- Sibovc Southwest mine will be depleted by 2024. As a result, new mine has to be developed. Required investments are in range of 300 – 500 million Euro over next 6 years period. New mine plan under preparation will provide exact figure.
- TPP Kosovo B has to be upgraded to meet EU Emission Limit Values, improve efficiency and extend its operating lifetime to year 2040. To achieve this, a recently conducted feasibility study concludes that 300 million Euro will need to be invested in this plant over next 10 years period.
- The 50 years old TPP Kosovo A must be shut down as it does not comply with environmental requirements, it is inefficient and unreliable. By shutting down TPP Kosovo A, Kosovo's power system will lose around 40% of its capacity.

In parallel, Government of Kosovo has developed incentives and support scheme for development of Renewable Energy Sources. Some RES based capacities have already been built and in operation, others are under construction, and up to 400 MW are at various stages of authorization procedure.

Kosova e Re Power Plant with installed capacity of 500 MW will help Kosovo bridge the unavoidable capacity gap caused by shut-down of TPP Kosovo A, and provide sufficient time required for development of all RES potential in Kosovo and to implement energy efficiency measures to extent they will have noticeable effect on power demand.

43. DOES CONSTRUCTION OF THE KOSOVA E RE POWER PLANT CREATE ANY NEW JOB OPPORTUNITIES?

Of course, the impact of major construction projects varies from country to country, since the labor-capital ratio employed in any given project can differ substantially, based on local economic conditions, an estimate of job creation is that each 1 billion Euro of spending on construction of a major infrastructure project, such as construction of this new power plant, supports as many as 10,000 man-year jobs. These jobs consist of three types: direct jobs, indirect jobs, and induced jobs. These jobs types of jobs will be created during construction phase.

Direct jobs are straightforward, since they are the skilled people actually employed on the project by the EPC contractors and sub-contractors who are paid out of the project funding, including any related financing.

Indirect jobs are created by the expenditures that project suppliers make, to produce materials bought and used for the project; these costs appear in the financials of the target project as part of the cost of project materials.

Induced jobs are jobs created elsewhere in the economy (not directly related to the project itself) as increases in income from the direct project spending lead to additional increases in spending by companies and their individual employees involved in the project.

Once construction of Kosova e Re Power Plant is completed and the power plant is operational the number of people directly employed in the power plant will be around 500. During operational phase of the power plant the most indirect jobs maintained / created are those in the lignite mine, and power plant support services. Other indirect jobs are created during contracting of works and services for power plant maintenance and overhauls.

44. HOW CAN THE AFFECTED COMMUNITY BENEFIT FROM COMMUNITY DEVELOPMENT FUND?

One immediate and direct benefit of the Kosova e Re Power Plant project is the establishment of a Community Development Fund and a 10 million Euro funding obligation of GenCo. The Community Development Fund will be disbursed following commencement of construction over a period of 7 years. GenCo will contribute in first 6 years with 1.5 million Euro per year, and 1 million Euro in 7th year.

The Community Development Fund will directly support those impacted by the project. The aim is to help communities to improve their social and physical environments, increase equity and social justice, overcome social exclusion, build capacities and involve the community in the decision-making processes that influence their conditions. The Fund is set up to reach the beneficiaries through development programs to be designed once the construction starts. Emphasis would be added to employment generation opportunities as preferred intervention highlighted by the community during initial consultations phase.

GenCo will have a right to lead the Community Development Fund Panel established by the Community Development Fund Agreement to be executed prior to Financial Closing of the Kosova e Re Power Plant transaction. GenCo and Government of Kosovo will jointly select the Projects to be funded from the Community Development Fund.

45. HOW WILL KOSOVO'S ECONOMY BENEFIT FROM THE KOSOVA E RE POWER PLANT?

Kosovo suffers from a severe energy shortage. Having a reliable and stable electricity supply is precondition to social wellbeing and economic activity. Having a domestic source of reliable and stable generation capacities is also contributing to direct jobs creation in the power sector. When combining centuries worth of energy resources with one of the most favorable lignite mining deposits in the world and state-of-the-art power station that meets the strictest environmental performance standards preconditions are created for economic growth.

It is without doubt that RES based generation capacities create a whole new economic sector and can create hundreds of new jobs and Kosovo is pursuing in that direction, it is also undisputed fact that lignite remains the main pillar of economic stability in the country.

Kosova e Re Power Plant will dramatically improve the security of power supply for decades to come allowing businesses to grow – including those in RES generation, create preconditions for attraction of foreign direct investments in other sectors (ICT, agriculture, tourism, minerals) and help improve public health by reducing pollution by replacing outdated TPP Kosova A with a modern power plant.

Studies have shown that due to lack of reliable power supply, Kosovo's economy is losing as much as 300 million Euro per year and if this is the only problem that Kosova e Re Power Plant can help resolve then there is no doubt about benefits of this project.

Additionally, thousands of new jobs will be created during 4-year construction period of Kosova e Re Power Plant and thousands more will be maintained as a result of continued mining operations.

The sole purpose of Kosova e Re Power Plant is improvement of security of energy supply leaving breathing room for decision makers and private sector to focus on efforts for jobs creation in other sectors of economy.

46. CAN KOSOVO ELECTRICITY CONSUMERS AFFORD ELECTRICITY FROM KOSOVA E RE POWER PLANT?

The cost of electricity from new Kosova e Re Power Plant is based on methodology that will take into account the actual costs required for development of Kosova e Re Power Plant. All these costs will be exactly known at Financial Closure Date.

Building blocks of electricity price from Kosova e Re Power Plant are:

- Cost of Capital
 - o Cost of Equity is known as it was bid parameter that was negotiated (Phase 1)
 - o Cost of Debt is currently not known as debt needs to be arranged (Phase II)
- Development Cost
 - o Capped Development Cost is known as it was bid parameter that was negotiated (Phase 1)
- Engineering-Procurement-Construction (EPC) Contractor Cost
 - o EPC cost will be known once bids for EPC and LTM Contract are due (Phase II). This cost will be a result of international competitive process.
- Operational Costs
 - o Operational Costs are largely known (labor, lignite, water, chemicals, services)
 - o Maintenance Cost is largely known but it will include input from EPC and LTM Contractor (Phase II) This cost will be a result of international competitive process.
- Other costs that are not in control of GenCo
 - o Change in law (taxes, royalty, ...), change in lignite price as a result of investment for development of new mine, etc.

Since a number of costs are currently not defined, but they can be assumed by experienced developer and transaction advisers, it was agreed that GenCo will take certain risk, e.g., risk of construction cost. As a result, the PPA electricity price is capped at 80 Euro/MWh. For illustrative purposes: if the EPC price is lower it will be reflected with lower electricity price; if the EPC price is higher the price will not go above 80 Euro/MWh.

It is worth stating that even if Government of Kosovo or KEK would seek to construct a new unit they would be subject to these uncertainties until the bids for EPC are due.

When evaluating this project, it must be recognized that Kosova e Re Power Plant will be handed over to Government of Kosovo at end of 20-year PPA term. Kosovo at that time will continue to benefit from this facility for additional 20-years at much lower cost of electricity than the price of PPA as the facility would have already amortized its financing. This is also the reason we are now benefiting from low cost power from TPP Kosovo A and TPP Kosovo B.

The electricity customers will pay for a real market price of having reliable and secure domestic source of power. The alternative is dependence on imported power and uncertain long-term electricity price projections.

Job maintenance and new jobs creation is also a policy factor that has been considered when taking these policy decisions.

47. DO CONSTRUCTION AND CONTRACTUAL ARRANGEMENTS OF THE KOSOVA E RE POWER PLANT HINDER LIBERALIZATION OF KOSOVO'S ELECTRICITY MARKET?

Government of Kosovo has recognized the need for a long-term power purchase agreement as the only financially affordable solution for Kosovo to attract the private sector investment necessary to satisfy the long-term environmental and security-of-supply concerns present in the country.

The duration of the power purchase agreement is sufficiently long to allow for amortization of financing while keeping the price at reasonable level for a new built facility. Any shorter duration of the power purchase agreement at the time when simultaneous investments are required in TPP Kosovo B and for development of mine would result with unaffordable electricity tariffs for most of consumer categories.

Top priority of Government of Kosovo is reinstating the reliable electricity supply while at the same time it makes effort to liberalize the supply side of the electricity sector within the reality of having long-term power purchase agreement in place to address security of supply in the country.

It is observed that regional electricity market will take some time to develop to a level where there will be surplus of generation and regional market will offer certain predictability of import prices. Most of new thermal generation capacities in the region are based on the long-term power purchase agreement or some sort of government off-take guarantees as this is the only possible way to finance these projects. The same situation is with the new RES capacities, it will be difficult if not impossible to get any private investor to finance a new RES capacity without the support scheme (long-term guaranteed offtake at feed-in tariff).

Kosovo's long-term vision is towards full market liberalization on generation and supply side and as a first step is creation of common power exchange between Kosovo and Albania.

48. HOW WILL THE KOSOVA E RE POWER PLANT AFFECT THE KOSOVO-ALBANIA MARKET COUPLING?

The basic principle of Kosovo – Albania market coupling is that both power systems seek to mutually benefit from completely different generation assets, hydro capacities in Albania and thermal power plants in Kosovo.

With sufficient thermal capacities Kosovo can contribute with reliable base power based on abundant lignite resources. Currently Kosovo does not have such capacities and is it obliged to begin planning the decommissioning of TPP Kosovo A, losing nearly half of the existing generation fleet. With construction of the Kosova e Re Power Plant, Kosovo will be able to provide certain amounts to cover base load demand of both power systems, while benefiting from peak energy and system reserves from Albania when TPP Kosovo B, the Kosova e Re Power Plant and RES would not be in position to follow the demand.

It is worth mentioning that both TPP Kosovo B and Kosova e Re Power Plant maximum capacity would be between 980 – 1050 MW, with additional 400 MW RES based generation when they become operational and subject to availability.

Availability of Kosova e Re Power Plant in the joint Kosovo – Albania market will be of great benefit during droughts when regional import prices are at their highest, thus Kosova e Re Power Plant will provide security of supply to both Kosovo and Albania.



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