

VOLOBE 2019, THE NEW HYDROELECTRIC POWER PLANT

Official visit of the Volobe hydroelectric power plant construction project

Ivondro, August 02, 2019 – As part of the implementation of the General State Policy for the improvement of electricity access for all Malagasy households, a government delegation carried out an inventory of the Volobe hydroelectric power plant construction project. The Minister of Economy and Finance, M. Richard RANDRIAMANDRATO, visited the site of the Volobe hydroelectric power plant accompanied by the General Secretary of the Ministry of Energy, Water and Hydrocarbons, M. Indriamanga RAKOTOARISOA, the General Director of Jirama, M. Olivier JAOMIARY and the General Director of CGHV (Compagnie Générale d'Hydroélectricité de Volobe) M. Rémy HUBER.

The Volobe hydroelectric power plant will start producing kilowatt-hours (kwh) in 2022. It will contribute to Madagascar's energy transition and will give millions of people access to clean, reliable and more affordable energy.

The Ministry of Economy and Finance plays an important role in the implementation of the Sahofika and Volobe projects, in collaboration with the MEEH. It is particularly involved in the financial arrangements for these projects, which are included in the Country Strategy Paper. The project was granted exceptional investment from the Madagascar office of the African Bank of Development.

THE MOST ADVANCED POWER PLANT PROJECT

In the Atsinanana region, ideally located between the country's largest cities, Toamasina and Antananarivo, there is a high-potential site where a hydroelectric power plant will be built: Volobe.

The dam alone will produce an average of 750 Gigawatt hours per year, or nearly 40% of Madagascar's current electricity production. It will provide access to electricity for nearly 2 million people.

The start of preliminary work could be launched at the end of 2019. Detailed feasibility studies have been carried out by leading international firms such as Tractebel Engie, Biotope, GLW International.

- A detailed study of rainfall with the collection and analysis of nearly 120 years of data
- A digital mapping of the site in order to limit all geological risks
- Deep drilling (more than 100m) to better understand the subsoil and an adaptation of the infrastructure
- Finally, environmental and societal studies were carried out for more than a year to assess the project's impact on the ecosystem and populations.

AN AMBITIOUS PROJECT TO FACE THE ENERGY CHALLENGES OF THE BIG ISLAND

Developed by the CGHV (Compagnie Générale d'Hydroélectricité de Volobe), whose shareholders are Jovena (Axian group), Colas, and soon joined by SNPower and Africa50, this "zero emission" green hydroelectric production with a power of 120MW and a production of 750 GWh/year, will replace the production of electricity based on diesel or heavy fuel oil which is highly polluting and inaccessible for the majority of households due to its cost. Twice as expensive as the rest of Africa. *Source : Article Jeune Afrique - 31 mai 2015 « Electricité : pourquoi les africains paient-ils si chers ?

It will reduce by half the costs of supplying electricity from JIRAMA to the final consumer.

AN ENERGY HIGHWAY

Under the impetus of the government and with the support of funders, including the African Development Bank, the high-voltage link between the interconnected networks of Toamasina and Antananarivo, a veritable energy highway, will form the backbone of Madagascar's electricity network and will enable part of the electricity produced by the Volobe power plant to be transmitted to the capital.

A PUBLIC-PRIVATE PARTNERSHIP BASED ON SOCIAL AND ENVIRONMENTAL COMMITMENT

Access to energy is a fundamental right. The Least Cost Development Plan (LCCDP) in November 2018, made it possible to design the Volobe project as the priority hydraulic project for Madagascar and foresees its commissioning in 2022/2023. The government has also asked the World Bank to provide financial guarantees for major hydroelectric projects developed through public-private partnerships.

To act as quickly as possible, the Malagasy State, Jirama and CGHV signed a framework agreement in December 2018 setting out the parties' commitment to sign the concession and electricity purchase contracts before the end of June 2019. This joint decision reflects the desire of the stakeholders to make rapid progress and to start work as soon as possible.

The support of the World Bank and the African Development Bank is essential in the implementation of this type of large-scale project: it guarantees both transparent governance of the project, but also compliance with international standards in terms of safety, reliability, respect for the environment and the populations directly affected by the project.

HYDROELECTRICITY, THE ONLY RENEWABLE AND MODULAR ENERGY

Hydropower, when combined with a reservoir (lake, dam, etc.), is one of the only modular renewable energies: it generates few or no greenhouse gases and its flow can be adapted to demand almost instantly. It is indeed possible to increase very quickly the electrical power produced in case of high demand and vice versa. This can stabilize and make the interconnected electrical systems very reliable and efficient.

With a catchment area of more than 3000km² exposed to the influences of the Indian Ocean trade winds, Volobe benefits from a different hydrology compared to the water supplies of the high plateaus. The exceptional characteristics of the Volobe site position it, as an essential complement to the electricity supply compared to other programs developed in the highlands of Madagascar, which have a different hydrology.

In addition, the geographical proximity of the Volobe site to industrial mining installations gives hope for a rapid energy transition. The consumption of green energy by these industries would be a major turning point for the Big Island.

A HIGH-END ENGINEERING FOR ACCESSIBILITY

The Volobe project is based on state-of-the-art engineering that will enable the cost per kilowatt-hour to be competitive in Madagascar. The cost of producing energy by the new plant will be reduced, making it possible to offer consumers a competitive purchase price per kWh and thus extend access to energy to as many people as possible. More than 300M€ are needed to carry out the works and installations, which will last 3 years and will start in 2019 with preparatory work.

The inhabitants of Atsinanana region, where Volobe is located, will benefit from this major project: the construction and development work will create between 400 and 500 direct and indirect jobs.

GENERATE IMPACT AT THE LOCAL LEVEL BY INVOLVING COMMUNITIES

All the stakeholders involved in the project have expressed their willingness to generate a positive and sustainable impact at the level of local communities. The revitalization of the local economy, human and social progress, are among the priorities of the CGHV.

To meet this commitment, consultation between the local populations and administrations will be conducted throughout the project and operation of the plant to find the most appropriate solutions to mitigate and compensate for the impacts of the work and the dam on the population..

Stakeholders will provide new housing for affected populations and ensure that their living conditions are improved: for example, by facilitating access to electricity, drinking water, sanitation and educational infrastructure.

ABOUT CGHV

A company incorporated under Malagasy law, CGHV (Compagnie Générale d'Hydroélectricité de Volobe) is a consortium of shareholder companies composed of Jovena Madagascar from the Axian group, SN Power, Africa 50 and Colas Madagascar, which was created to develop the Volobe project in 2016. The CGHV will be in charge of the different phases of the project, from development to construction and then operation of the facilities and equipment. It will be a regional and national player throughout the concession that will be awarded to it. By implementing the policies of its shareholders, particularly as a responsible player in the social and environmental fields, the CGHV will support the country's energy transition and is committed to feeding the backbone of the Malagasy electricity grid. This "green" hydraulic production with a power of 120MW and a production of 750 GWh/year will replace the production of électricité based on diesel or heavy fuel oil from 2022 onwards.

ABOUT JOVENA MADAGASCAR

Jovena is now positioning itself as a major player in the supply of energy in Madagascar. Jovena has the largest oil distribution network in Madagascar with 88 petrol stations throughout the island. An ambitious investment plan has enabled it to position itself as the leader in oil distribution in Madagascar with more than 35% market share.

Jovena is also involved in energy production, with a 76MW Heavy Fuel Oil thermal power plant on the Antananarivo interconnected grid, and is currently developing 4 solar hybrid projects in Menabe.

ABOUT AXIAN

CGHV is a Axian group company. Axian is a diversified group present in 5 lines of business with strong growth potential: real estate, telecommunications, financial services, energy and innovation. With more than 3700 employees (Madagascar, Indian Ocean and other African countries), the Axian group is a partner for the country's economic development.

ABOUT AFRICA 50

AF50 aims to become a major African investor in infrastructure and to do so aims to: - Improve infrastructure in Africa by developing bankable projects and catalysing investment in shareholder countries - Leverage public funds to raise private capital from long-term institutional investors in Africa and elsewhere - Operate commercially with an appropriate financial return while promoting economic development

ABOUT SN POWER

SN Power is a commercial company focusing its investments in the production of clean and renewable energy, through hydroelectricity, in emerging markets. The company was created in 2002 to become a leading hydroelectric company in emerging markets, contributing to economic growth and sustainable development.

The company focuses on the acquisition, development, construction and operation of hydroelectric assets. SN Power is a financial investor with a solid capital base and access to extensive construction and operational expertise.

SN Power is 100% owned by Norfund, the Norwegian Development Finance Institution (DFI) that invests venture capital in profitable private companies in emerging markets.

À PROPOS DE COLAS MADAGASCAR ET COLAS PROJECTS

The Colas Group is active in all businesses related to the construction and maintenance of roads and all other forms of transport infrastructure (air, rail, maritime), urban development and leisure, through two business segments: Road (including civil engineering and construction activities), the Group's core business, and complementary Specialty activities (Railways, Waterproofing, Road Safety, Networks).

Colas Madagascar has been present on the island for more than 60 years and is active in all construction trades (road, civil engineering, construction, maritime works, airport works, dams). Colas Projects is a structure dedicated to the management of major projects in France and abroad in many fields such as road, motorway, port, airport, rail, urban development and urban public transport infrastructure projects.

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