

# INVESTMENT OPPORTUNITY:

## *3GW Mambilla Hydroelectric Power Project*

### 1.0 BACKGROUND

Initially conceived in the early 1980s, the Mambilla HEPP [Hydro-electric Power Project] feasibility report by Binnie & Partners in association with Diyam Consultants envisaged a 4GW three dam scheme on the Gembu Plateau in the Mambilla highlands of Taraba State, Nigeria comprising of Gembu dam [now Nya dam in the latest iteration], Sumsum dam, Nghu dam and Api weir with interconnecting underground water power tunnels, an underground power house at Abong at the bottom of the Gembu plateau as well as other auxiliary works including switch yards and power evacuation transmission lines to Makurdi and Jalingo. The projected firm energy of the scheme is 4,473GWh/a with average energy output of 5,459GWh/a.

Since this initial study, the project has undergone several technical reviews and scoping iterations, and well as being variously considered for development either on a government funded host generation basis or as a public, private partnership scheme. In 2007, the Federal Government of Nigeria entered into an agreement with a consortium of Chinese Engineering, Procurement and Construction [EPC] companies for the execution of the project under a government-owned host generation arrangement with substantial contractor finance support from the Chinese EXIMBANK and SINOSURE for a 3.055GW scheme.

After nine years of contractual disputes amongst the EPC entities on the one hand, as well as lack of clarity and purposeful action on the part of the Federal Government, most of the issues that have constrained the progress of the project appear to have been overcome, with the parties set to proceed on the basis of a 85:15 Contractor Finance: Capital Contribution to fund the execution of the project, which has been projected to cost about \$6 billion [in 2016]. However, whereas the EPC entities have secured funding commitments from China for the 85% of the capital costs of the project, it has become apparent that the Federal Government of Nigeria (FGN) has challenges in meeting the 15% capital contribution [about \$1 billion] from budgetary sources given the poor state of its finances and the current recession. In fact, in spite of the Mambilla Hydropower Project's classification as a Tier 1 Priority Project, there is no provision for its funding in the 2017 budget cycle; significantly, it is also not adequately captured within the 2017 - 2020 Medium Term Expenditure Framework [MTEF] of the FGN. However, it forms part of the external borrowing pipeline of about \$30 billion which the executive branch has requested approval from the National Assembly for, but which it is yet to receive positive consideration.

In the light of the above, it becomes very clear that a different approach to the project structure is an imperative if it must go forward within the envisaged timelines. Therein lies the opportunity that we seek to exploit through the creation of an investment and project development vehicle which we have provisionally named "Mambilla Capital Partners (MCP)."

## 2.0 MAMBILLA CAPITAL PARTNERS LLC

### The Concept:

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A Structured Project Development & Investment Vehicle (To be established by Interaf Limited and its Wall Street affiliates LCN Capital LLC and Maroon Capital LLC).

### Purpose:

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Finance of Nigerian Counterpart Contribution of \$1 billion (15%) of total CAPEX required for 3,055MW Mambilla Hydroelectric Power Project. Estimated project cost is \$5.8 billion [subject, in our considered opinion to substantial downward review.]

### Proposed Approach:

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1. Create an asset-based framework for project ownership; restructure project development as PPP/IPP (BOOT/DFBO) with MCP as core private developer.
2. Adopt a structured Project Finance funding framework that provides for a 85:15 Debt/Equity ratio, with 85% to be provided by Chinese Banks and guaranteed by SINOSURE under an ECA window, and the 15% Nigerian capital contribution transformed to project CAPEX equity component.
3. MCP to arrange/underwrite the \$1 billion Nigerian Capital Contribution under an equity-bridge finance/venture capital/private equity framework with appropriate guarantees from the Federal Government of Nigeria.
4. MCP to assume ownership of 100% equity shares of the project company during the development phase and manage the process of the liquidation of the equity-bridge debt via an IPO and/or Private Placements with multilateral financial institutions and specialized energy investment funds, (as well as the issuance of Project Bonds, Collateralized Debt Obligations and Sovereign Bonds) of a proportion of or all of the shares of the project company as may be necessary at an appropriate time during the development and construction (preferably the commercial operation date - COD - of the project).
5. FGN to bear the costs of consultancy and management fees for the structuring of the finance arrangement by MCP.
6. PowerChina Sinohydro and associated Chinese EPC entities (China Gezhouba Group Corporation) to pay either for financial & project structuring advisory services to be provided by MCP under the arrangement or act as Co-sponsors by taking an equity stake in the SPV.
7. Required PPP incentives:
  - Tax holiday (Pioneer Status)
  - Back-stop Guarantees
  - Environmental Support Grants
  - Tariff Enhancement (Frontrunner Large Hydro Independent Power Project)

### NOTES:

- a. MCP are already working with PowerChina Sinohydro as joint developers of the 1.1GW Makurdi HEPP and we are in discussions with them on the above.
- b. MCP would have the clout with FGN to step in as an angel investor to reposition the project as an IPP and take it over whilst drawing on our relationship with PowerChina as well.
- c. Key Counter-Party Champions: VP, ABT, BRF, OE, COS\*, HMF, PS-FMP.

### **3.0 PROJECT ECONOMICS**

Under the current Government owned host generation model, the economic analysis suggests a base case IRR of 6.4% under a benchmarked Long Run Marginal Cost framework prescribed by NERC under its MYTO with Energy Charge of USD 45/MWh and Capacity Charge of kUSD 5.2/MW/month, with improvement in IRR to 10.22% upon sensitivity analysis assuming an Energy Charge of USD 60/MWh and Capacity Charge of kUSD 7.2/MW/month. In an IPP scenario, it would be imperative to conduct the analysis under an individual, project-specific Long Run Marginal Cost framework, and would require a tariff regime that puts the Energy and Capacity charges at values approaching parity with current front runner thermal plants but lower than renewable solar and wind power projects. This would be somewhere around USD 100/MWh and kUSD 10/MW/month respectively, and this cost-reflective tariff is a critical factor for triggering the interest and commitment of private equity participants to move the project forward to expedited realization.

#### **3.1 Prospective EBF/Co-Finance Sources/Development Partners**

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- AFC
- NSWIA
- CBN/BOI PIF
- DBN
- NDPHCN
- AfDB
- IFC
- Joule Africa
- Norfund
- EIB
- AIDB