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# PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC2650

Project Name	OMVG Energy Project: WAPP APL 4 - Phase 2 (P146830)				
Region	AFRICA				
Country	Africa				
Sector(s)	Transmission and Distribution of Electricity (100%)				
Theme(s)	Regional integration (70%), Infrastructure services for private sector development (15%), Climate change (15%)				
<b>Lending Instrument</b>	Investment Project Financing				
Project ID	P146830				
Borrower(s)	The Republic of Guinea, The Republic of Gambia, The Republic of Guinea Bissau, The Republic of Senegal				
<b>Implementing Agency</b>	OMVG				
Environmental Category	B-Partial Assessment				
Date PID Prepared/ Updated	03-Dec-2013				
Date PID Approved/ Disclosed	03-Jan-2014				
Estimated Date of Appraisal Completion					
Estimated Date of Board Approval	14-Nov-2014				
Concept Review Decision	Track II - The review did authorize the preparation to continue				

#### I. Introduction and Context

#### **Country Context**

The 15 member states of the Economic Community of West African States (ECOWAS) occupy some five million square kilometers and are currently home to about 250 million people. Half of the present population lives in poverty, with per capita income barely above US\$300 per year, and x million still lack access to electricity. Despite the region's large energy endowment, the per capita consumption of electricity is among the lowest in the world with approximately 160 kWh per capita. The three major shortcomings in the region at the present time: (a) over-reliance on hydro-based power systems, which not provide sufficient regional security of electricity supply, and (b) the lack of adequate transmission infrastructure (within and between national power systems), which is the weakest link in power sector development, and (c) insufficient investment in distribution and rural electrification.

Acknowledging the fact that past efforts to achieve national self-sufficiency in electricity supply have been uneconomical due to the high cost of establishing power generation and transmission infrastructure, ECOWAS Member States have has formed and put in place the West Africa Power Pool (WAPP) – a cooperative power pooling mechanism for integrating national power system operations into a unified regional electricity market – with the expectation that it will, over the medium to long term, assure citizens of a stable and reliable electricity supply at affordable costs.

#### **Sectoral and Institutional Context**

The Member States of ECOWAS prepared a Master Plan as the blueprint for the integration of their electricity networks. The Implementation "road map" of the WAPP Infrastructure Program is based on realizing distinct but mutually reinforcing infrastructure sub-programs, which when fully realized will converge into a unified, well-functioning regional power pooling mechanism in West Africa. The five (5) sub-programs being implemented by WAPP are the following: (i) Coastal Transmission Backbone Subprogram (Cote d'Ivoire, Ghana, Benin/Togo, Nigeria), (ii) Inter-zonal Transmission Hub Sub-program (Burkina Faso and Mali via Ghana, OMVS via Mali, Liberia-Sierra Leone-Guinea via Cote d'Ivoire),(iii) OMVG/OMVS Power System Development Subprogram (The Gambia, Guinea, Guinea Bissau, Mali, Senegal), and (iv) North-core Transmission Subprogram (Nigeria, Niger, Burkina Faso, Benin):- Aims to upgrade and extend existing capacity to transfer low cost energy supply to Niger, Burkina Faso, North Benin/Togo.

The World Bank has supported the WAPP through the adjustable program lending (APL) instrument, within the framework of the World Bank's Regional Integration Assistance Strategy (RIAS) for West Africa, as the vehicle for providing IDA credit support to the WAPP initiative. The APL instrument enables IDA credit support to be provided in a flexible manner – when borrowers have satisfied the policy triggers (country commitments under the ECOWAS Energy Protocol, EEP) and when individual WAPP priority investments are ready to receive IDA credit support. The four phases of the APL under the WAPP program have mobilized 757.9 million.

The latest version of the WAPP Master Plan includes the proposed interconnection loop between Senegal, The Gambia, Guinea-Bissau and Guinea on the priority list of projects. The Interconnection loop includes the following components: (i) 1709 km of power transmission line in 225 kV, and (ii) 15 substations HV / MV for powering loads National Electricity Companies. The OMVG sub-region (particularly Guinea) has almost 6000 MW of hydro-generation potential.

#### **Relationship to CAS**

The activities proposed under this project are well aligned with the strategic context in each country that aims for improved access to affordable electricity. Similarly, the project is also in line with Africa's energy strategy, in particular the first three pillars: (a) Expanding electricity coverage, (b) Scaling up regional power generation and transmission capacity, and (c) Improving sector planning and utility performance.

The project is supported by the recently Board-approved paper "Directions for the World Bank Group's Energy Sector" which puts a strong emphasis on leveraging private sector resources and experience to enable reliable and more efficient energy sectors in developing countries. In addition, the paper explicitly states that "the WBG will support the move toward a more sustainable energy mix through regulatory and policy analysis, capacity building, technical and advisory services, financing and guarantees, and partnerships."

## **II.** Proposed Development Objective(s)

## **Proposed Development Objective(s) (From PCN)**

8. The project developmental objective is to increase electricity supply to Gambia, Guinea, Guinea-Bissau and Senegal through developing the interconnection infrastructure.

#### **Key Results (From PCN)**

9. The expected outcomes include: (i) increasing cross-border electricity trade between OMVG that will allow more cost efficient coverage of power demand; and (ii) contribute to the development of the renewable energy resources in the sub region to increase supply.

### **III. Preliminary Description**

## **Concept Description**

The proposed WAPP APL 4, Phase 2 (OMV Energy project), would finance three out seven transmission line lots of the OMVG Interconnection Loop, and technical assistance according to the following components:

Component 1: 225 kV Interconnection between Gambia, Guinea, Guinea-Bissau and Senegal (Project Cost US\$ 153million)

This component involves the construction of a 225 kV transmission network capable of handling 800 MW. It includes construction of a 651km of 225 kV transmission line (of a total 1700km in the network), connecting the electrical networks of the four countries of the OMVG (Gambia, Guinea, Guinea-Bissau and Senegal). The 651km of transmission lines includes construction of Lots 5, 6, and 7 according to the following distribution: Senegal: 163 km, US\$ 41.4m; Gambia: 182.8 km, US\$ 45.5m; Guinea: 86 km, USD\$19 m, Guinea Bissau: 217.6 km, US\$ 47.2m.

Component 2: Project Management and Technical Assistance to OMVG Secretariat (Project \$97m, IDA Credit US\$ 20 million)

IDA credit will focus on TA activities related to institutional and commercial activities including: (i) the institutional and commercial arrangements to be put in place in order to ensure a sustainable performance of the generation and transmission facilities through an effective O&M model; (ii) Feasibility studies for at least three hydropower developments in the basin; (iii) structure to empower OMVG to coordinate the use of resources (hydropower) and the development of future generation facilities in such a way as to maximize the long term benefits for each member country

## IV. Safeguard Policies that might apply

Safeguard Policies Triggered by the Project	Yes	No	TBD
Environmental Assessment OP/BP 4.01	x		
Natural Habitats OP/BP 4.04			X
Forests OP/BP 4.36	X		
Pest Management OP 4.09		X	
Physical Cultural Resources OP/BP 4.11	x		
Indigenous Peoples OP/BP 4.10		X	
Involuntary Resettlement OP/BP 4.12	X		
Safety of Dams OP/BP 4.37		×	

Projects on International Waterways OP/BP 7.50		X	
Projects in Disputed Areas OP/BP 7.60		×	

# V. Financing (in USD Million)

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Total Project Cost:	715.00	Total Bank Fina	ancing:	173.00	
Financing Gap:	0.00				
Financing Source					Amount
BORROWER/RECIPIENT					0.00
International Development Association (IDA)					173.00
ABU DHABI Abu Dhabi Fund for Arab Economic Developmen					20.00
African Development Bank					100.00
ECOWAS Bank for Investment and Development					27.00
EC European Investment Bank					112.00
FRANCE Govt. of [MOFA and AFD (C2D)]					50.00
Islamic Development Bank					168.00
GERMANY KREDITANSTALT FUR WIEDERAUFBAU (KF					35.00
West African Development Bank					30.00
Total					715.00

# VI. Contact point

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Name: The Republic of Guinea Bissau

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