

# PROJECT INFORMATION DOCUMENT (PID) CONCEPT STAGE

Report No.: PIDC3350

<b>Project Name</b>	SAPP-Program for Accelerating Transformational Energy Projects (P126661)
<b>Region</b>	AFRICA
<b>Country</b>	Africa
<b>Sector(s)</b>	General energy sector (100%)
<b>Theme(s)</b>	Infrastructure services for private sector development (100%)
<b>Lending Instrument</b>	Technical Assistance Loan
<b>Project ID</b>	P126661
<b>Borrower(s)</b>	Southern African Power Pool Coordination Centre
<b>Implementing Agency</b>	Southern Africa Power Pool Coordination Centre
<b>Environmental Category</b>	A-Full Assessment
<b>Date PID Prepared/ Updated</b>	17-Apr-2014
<b>Date PID Approved/ Disclosed</b>	20-Apr-2014
<b>Estimated Date of Appraisal Completion</b>	21-May-2014
<b>Estimated Date of Board Approval</b>	22-Jul-2014
<b>Concept Review Decision</b>	Track II - The review did authorize the preparation to continue

## I. Introduction and Context

### Country Context

Southern Africa – intended as the group of countries that constitute the Southern African Development Community (SADC) – is a large and diverse region with huge growth potential but also major development needs. The region spans vast geographical area of nearly 9.09 million sq. km and is home to over 280 million people. A challenging economic geography poses major constraints to expanding growth and shared prosperity in Southern Africa. Out of its fifteen countries, six are landlocked, eight have populations below 15 million people, six have economies smaller than \$10 billion per annum and several rely on transnational river basins for their water resources. Among all African regional economic communities, the SADC presents the largest concentration of middle income countries but also a striking disparity in the level of development of its members. South Africa is the economic engine of the region, driving demand and market opportunities in Southern Africa and beyond. Angola, Botswana, Namibia, Mauritius, Seychelles, and South Africa, have a GDP per capita well in excess to US\$5,000. On the opposite side of the

spectrum, there are a handful of low income countries with a GDP per capita below US\$1,000 and poverty rates among the highest in Africa. However, most of these low income countries, including DRC, Mozambique, Tanzania, Zambia, and Zimbabwe are large or potentially large economies. Knitting these emerging economies more closely together and linking them to markets in South Africa would help create a larger market and greater economic opportunities in the region.

### **Sectoral and Institutional Context**

Electricity access in Southern Africa is around 28 percent, which remains below the continental average of 31 percent. If South Africa is excluded, access would barely reach 17 percent, the lowest rate among all Africa sub-regions. The total installed capacity of the region is 57.1 GW of which 51.7 GW is actually available. This is inadequate to accommodate the existing demand (nearly 53.8 GW), let alone future demand, which is estimated to grow by at least 3 percent per annum, with peak loads reaching 77 GW by 2020 and 115 GW by 2030.

Expanding electricity supply in line with projected demand growth requires a major scale up of generation and associated transmission capacity. The region has huge energy resources, especially hydro and thermal. Thermal resources, notably coal account for the bulk of the existing generation capacity (80 percent); less than 20 percent is hydro-based. The challenge is that the development of most of these resources and especially hydro requires investments of a scale that cannot be justified based on national demand alone. Arranging such investments as regional projects that accommodate demand from multiple countries is critical to make them economically viable. Regional generation and transmission projects hold great transformational potential as they can change the region's economic outlook and growth trajectory. Centers of high demand in the south, which are, or close to, becoming energy constrained and have traditionally relied on expensive thermal generation, would be allowed to import more cost-efficient electricity, and notably hydropower, from centers of supply in the north. Also, security and reliability of supply would be greatly improved by taking advantage of different resources and different peak demand times across the region and by sharing generation reserve margins among several utilities or countries.

Promoting regional cooperation on energy development is a key priority for the SADC, which has developed strategies and established dedicated agencies that together form a consolidated regional institutional architecture. In 1996 the SADC adopted a Protocol on Energy, which provides a framework for cooperation on energy development and harmonization of policies, strategies, and procedures among SADC member states. In 1995, the SADC established the Southern African Power Pool (SAPP) with the mandate to facilitate the development of a competitive electricity market in the Southern African region and ensure reliable, efficient and sustainable supply to all its members. The SAPP coordinates the region's power system and includes twelve SADC countries (Angola, Botswana, DRC, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe). Nine of these countries are operating members, linked to the interconnected grid that carries around 97 percent of the energy produced in the SAPP. The non-operating members – which are yet to construct transmission links to the regional grid – are Angola, Malawi and Tanzania. The SAPP governance structure includes an Executive Committee, which acts as the Board of the SAPP, and a Management Committee, which is responsible for overall administration of the Pool. Planning, Operating, Environmental, and Markets Sub-committees supervise technical issues. In 2002, a Coordination Centre was established in Harare, Zimbabwe to monitor operations and transactions within the Pool, including controlling dispatching operations and serving as trading center for electricity auctions.

Priority regional energy projects have been selected by the SAPP and endorsed by member countries at the highest level. A Regional Generation and Transmission Expansion Plan (SAPP Pool Plan) originally commissioned in 2001 and revised in 2009 has identified a detailed list of priority generation and transmission projects that accommodate fast increasing electricity demand in the region at the least cost over the period from 2006 to 2025. Based on a thorough analytical methodology, the SAPP has further refined this list and selected the projects that should be given highest priority by member countries and promoted for investment. In May 2013, the SADC Energy Ministers have formally approved the identified priority projects and committed to fast-track their implementation. The projects have been presented to potential investors at several investor conferences in Africa and elsewhere.

In the meantime, the SADC has attributed to the SAPP and its Coordination Center a clear mandate for project preparation and defined governance arrangements to seek consensus and authorization at government level on the individual projects (as set out in the SADC communique dated February 21, 2008). Accordingly, the SAPP Executive Committee has expanded the functions of the Coordination Center to include project coordination on a per-project basis. Recently, the Coordination Center has served as coordinator for major interconnection projects, notably the Zimbabwe-Zambia-Botswana-Namibia (ZIZABONA) project and the Central Transmission Corridor (CTC) project in Zimbabwe, and has completed peers reviews on most short-term to medium-term projects in Zambia, Mozambique and Namibia. Grant funding for project preparation and packaging for specific projects has been channeled through the Coordination Center by a number of institutions such as the Development Bank of Southern Africa (DBSA), the African Development Bank (AfDB), the Government of Norway and the Swedish Development Cooperation Agency (SIDA) among others.

At the SADC Energy Ministers meeting held in May 2013, the Ministers reiterated that the function of project preparation and implementation should be added to the mandate of the SAPP and that appropriate skills should be established within the Coordination Center. A meeting of the SAPP Executive Committee held in March 2014 has formally approved the establishment of a Projects Acceleration Team under the SAPP Coordination Center, with a mandate to carry out project preparation support at regional level.

Despite their recognized development impact and the advocacy at the highest levels, priority regional projects have failed to move forward. Inadequate preparation resulting in low bankability of these projects is now recognized as the main reason. Precision and quality in preparation is the primary condition to attract financing, especially commercial financing. However, preparation of complex and large cross-border energy projects can cost anything between 2-5 percent of project's capital costs and in some cases reach as high as 10 percent. Grants funding for preparation is critical for reaching financial closure. Sources such as IDA and the African Development Fund of the African Development Bank are the only ones that can mobilize funding at the scale required for transformational energy projects and African regional organizations as well as individual countries have been recently calling for their greater use. The scarcity of skills for project preparation has also been a major impediment to creating a pipeline of bankable regional energy projects and has imposed large costs in terms of reduced confidence by the private sector and delays due to eventual re-bidding or renewed preparation of projects.

The proposed Project is intended to provide the SAPP with critical technical assistance to become a catalyst for priority regional energy projects consistent with the mandate it has been given by the

SADC. The two main components of the Project – the establishment of a Project Acceleration Team (PAT) within the SAPP Coordination Center comprising world-class experts with all the profiles required to take a project from design to financial close, and the provision of project preparation funds – will endow the SAPP with the mass of skills and resources needed to move projects forward. Analytical support under the Project will also be deployed to enhance regional planning capacity, ensure better selection and coordination of investments as well as increase project sustainability.

### **Relationship to CAS**

The Project is aligned with the goals and strategies of relevant regional and sub-regional organizations including the New Partnership for Africa's Development (NEPAD) and the SADC. In particular, the Project is consistent with the NEPAD's development strategy toward regional integration of infrastructure and notably in the energy sector, recognizing the SAPP as a framework for integration. The Project is also aligned with the priorities and the development plans adopted by the SADC. Since the adoption of the Protocol on Energy, the SADC has enacted several strategic plans for energy development in the region, all of which target the coordinated implementation of energy projects that can drive regional integration and economic growth in Southern Africa.

The Project is designed to contribute to the World Bank's overarching goals of ending extreme poverty and boosting shared prosperity and to deliver on a number of important tenets of the new World Bank Group Strategy. Adequate electricity supply and access are key determinants of economic and social growth. Electricity supply is a critical input to raise firm's productivity and competitiveness and to enable economies to attract investments, expand and diversify production and ultimately create jobs. Electricity access at the household level helps people raise their living standards and grow out of poverty. By advancing preparation of priority regional energy projects, the proposed Project will ultimately contribute to unlock the region's energy potential and ensure expanded and reliable electricity services to the benefit of Southern African people and firms. The Project also seeks to identify projects with transformational potential and to maximize efforts to advance such projects by leveraging and coordinating support by multiple donors. Both objectives are tenets of the World Bank's Strategy. By increasing the bankability of such projects, the proposed Project will enable larger private investments in energy, in consistency with the World Bank Strategy's pillar of supporting the private sector.

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

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

The Project Development Objective is to facilitate the preparation of priority regional energy projects in the Southern African Power Pool region.

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

The key indicator for the PDO level results is the following:

- (a) Priority regional energy projects whose preparation is facilitated (number).

Intermediate outcomes have been identified in relation to the various activities that will contribute to achieve the PDO. These include:

- (a) Projects Acceleration Team staff recruited and operational (number);
- (b) Preparatory activities for priority regional energy projects completed (number); and
- (c) Regional analytical studies completed (number).

### III. Preliminary Description

#### Concept Description

The project has the following three components:

Component A: Setting up the Project Acceleration Team (total cost US\$7 million). This component will finance the establishment of a Project Acceleration Team, a high caliber core team in charge of moving forward the preparation of the regional projects identified as priorities to the Southern African Power Pool (SAPP) region. The PAT will respond directly to the SAPP Coordination Center and will consist of a Coordinator and a number of key personnel covering all the key functions needed to prepare regional energy projects (including technical and financial analysis; legal and transaction advisory; environmental and social management; procurement; financial management; etc.). The PAT will assess and adjust to the type of role it needs to play on a specific project, which may range from taking over selected or all preparation activities to providing financing to the concerned agencies and ensuring that preparation effectively serves the needs of project stakeholders. The PAT will be expected to provide close guidance to government agencies and utilities on the appropriate packaging and allocation of preparation work and the information requirements prior to bidding out projects or components of projects. IDA funding will be used as efficiently as possible and in a way to enable and crowd in private sector funds for project preparation activities. The costs related to renting an office for the PAT and other operating expenses will also be covered under this component.

Component B: Project Preparation Funds (total cost US\$40 million). The funds in this component will be managed by the PAT and be used for a variety of tasks related to preparation of large and complex energy projects, including technical, economic and financial feasibility studies; environmental and social assessments; preparation of legal documentation and financial transaction advisory services, especially related to PPA negotiations; etc. Significant technical and legal support is likely to be required as well as stakeholder events, roadshows, etc. There will be some flexibility in earmarking funds as long as they are clearly used to improve the quality of project packages and enable sponsors and credit agencies to commit commercial equity and debt. Depending on the stage of the process, the funds may be used independently or jointly with the funds of a project sponsor to advance project preparation. Funds may also be used to support the public sector in its dealings and negotiations with the private sector. No funding will be used to finance infrastructure works.

Component C: Analytical support to SAPP (total cost US\$3 million). This component will support critical analytical work to build a solid knowledge base to investment decisions and help ensure long-term sustainability of investments. A key task will be the update and revision of the SAPP Pool Plan based on a 'risk scenarios approach', which will allow to better capture the diverse structural risks associated to regional integration. The analysis will also include a 'robustness' assessment, which will help identify options to adjust investment decisions to such risks as well as isolate projects that remain robust under all circumstances and that should thus be prioritized. The SAPP Pool Plan revision will be supported and complemented by a number of studies potentially including: (a) a review of the generation and transmission expansion plans of the various SAPP members; (b) a mapping of the energy resources available to the SAPP region with a specific focus on renewable resources; and (c) major regional environmental and social impact studies, to improve the understanding and mitigation of the key risks associated with the implementation of large-size and complex energy projects. The exact number and scope of these studies remain to be defined. A key study will concern the link between water use and energy development in the region. Funding

may be allocated for follow-on work on these studies to inform preparation of specific projects as well as for dissemination among planners, policymakers and investors.

#### 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		x	
Projects on International Waterways OP/BP 7.50		x	
Projects in Disputed Areas OP/BP 7.60		x	

#### V. Financing (in USD Million)

Total Project Cost:	50.00	Total Bank Financing:	50.00
Financing Gap:	0.00		
<b>Financing Source</b>			<b>Amount</b>
BORROWER/RECIPIENT			0.00
IDA Grant			50.00
Total			50.00

#### VI. Contact point

##### World Bank

Contact: Mustafa Zakir Hussain  
 Title: Senior Energy Specialist  
 Tel: 458-9510  
 Email: mhussain2@worldbank.org

##### Borrower/Client/Recipient

Name: Southern African Power Pool Coordination Centre  
 Contact: Lawrence Musaba  
 Title: Manager  
 Tel:  
 Email: musaba@sapp.so.zw

##### Implementing Agencies

Name: Southern Africa Power Pool Coordination Centre

Contact: Lawrence Musaba  
Title: Director SAPP Coordinator Center  
Tel:  
Email: musaba@sapp.co.zw

**VII. For more information contact:**

The InfoShop  
The World Bank  
1818 H Street, NW  
Washington, D.C. 20433  
Telephone: (202) 458-4500  
Fax: (202) 522-1500  
Web: <http://www.worldbank.org/infoshop>