Document of
The World Bank

Report No: 86076-AFR

INTERNATIONAL DEVELOPMENT ASSOCIATION

PROJECT APPRAISAL DOCUMENT

ON A

PROPOSED GRANT

IN THE AMOUNT OF SDR13.2 MILLION
(US$ 20 MILLION EQUIVALENT)

TO THE

SOUTHERN AFRICAN POWER POOL

FOR A

SOUTHERN AFRICAN POWER POOL (SAPP) – PROGRAM FOR ACCELERATING TRANSFORMATIONAL ENERGY PROJECTS

October 21, 2014

Energy & Extractives Global Practice
Africa Regional Integration

CURRENCY EQUIVALENTS

(Exchange Rate Effective August 31, 2014)

Currency Unit = US$
US$ 1 = SDR 0.658597

FISCAL YEAR
January 1 – December 31

ABBREVIATIONS AND ACRONYMS

ADF	African Development Fund
AfDB	African Development Bank
AUC	African Union Commission
BLNS	Botswana, Lesotho, Namibia, and Swaziland
CLSG	Côte d'Ivoire, Sierra Leone, Liberia, and Guinea
CQS	Selection based on the Consultant's qualifications
DA	Designated Account
DAM	Day-Ahead Market
DBSA	Development Bank of Southern Africa
DRC	Democratic Republic of Congo
ENSAP	Eastern Nile Subsidiary Action Program
ESIA	Environmental and Social Impact Assessment
ESMF	Environmental and Social Management Framework
ESMP	Environmental and Social Management Plan
FM	Financial Management
GDP	Gross Domestic Product
GIS	Geographic Information System
GW	Gigawatt
IBRD	International Bank for Reconstruction and Development
IC	Individual Consultants
ICA	Infrastructure Consortium for Africa
IDA	International Development Association
IEA	International Energy Agency
IFR	Interim Unaudited Financial Reports
IPP	Independent Power Producers
IPR	Independent Post Reviews
IS	Implementation Support
LC	Letters of Credit
LCS	Least-cost selection
MW	Megawatt
NBI	Nile Basin Initiative
NCB	National Competitive Bidding
NELSAP	Nile Equatorial Lakes Subsidiary Action Program
NEPAD	New Partnership for Africa's Development

ORAF	Operational Risk Assessment Framework
PAT	Projects Acceleration Team
PIDA	Programme for Infrastructure Development in Africa
PIPES	Planning, Investment Programming and Environmental Safeguards
PPA	Power Purchase Agreement
PPF	Project Preparation Facility
PPR	Procurement Post Reviews
P-RAMS	Procurement Risk Management System
QBS	Quality-Based Selection
RAP	Resettlement Action Plan
RERA	Regional Electricity Regulators Association
RIAS	Regional Integration Assistance Strategy for Sub-Saharan Africa
RPF	Resettlement Policy Framework
SADC	Southern African Development Community
SAPP	Southern African Power Pool
SIDA	Swedish International Development Cooperation Agency
SOE	Statement of Expenditures
SSS	Single-source selection
STEM	Short-Term Energy Market
TA	Technical Assistance
ToR	Terms of Reference
WAPP	West African Power Pool
ZIZABONA	Zimbabwe, Zambia, Botswana, and Namibia

Regional Director:	Colin Bruce
Senior Practice Director:	Anita Marangoly George
Practice Manager:	Lucio Monari
Task Team Leaders:	Mustafa Zakir Hussain and Elvira Morella

SAPP-Program for Accelerating Transformational Energy Projects

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PAD DATA SHEET

Africa

SAPP-Program for Accelerating Transformational Energy Projects (P126661)

PROJECT APPRAISAL DOCUMENT

AFRICA

0000009058

Report No.: PAD967

Basic Information			
Project ID	EA Category		Team Leader
P126661	A - Full Assessment		Mustafa Zakir Hussain
Lending Instrument	Fragile and/or Capacity Constraints [ ]		
Investment Project Financing	Financial Intermediaries [ ]		
	Series of Projects [ ]		
Project Implementation Start Date	Project Implementation End Date		
11-Nov-2014	11-Nov-2019		
Expected Effectiveness Date	Expected Closing Date		
23-Feb-2015	30-Nov-2019		
Joint IFC			
No			
Practice Manager/Manager	Senior Global Practice Director	Country Director	Regional Vice President
Lucio Monari	Anita Marangoly George	Colin Bruce	Sri Mulyani Indrawati

Borrower: Southern African Power Pool			
Responsible Agency: Southern African Power Pool Coordination Centre			
Contact:	Lawrence Musaba	Title:	Manager
Telephone No.:	2634335468	Email:	musaba@sapp.co.zw

Project Financing Data(in USD Million)					
[ ]	Loan	[X]	IDA Grant	[ ]	Guarantee
[ ]	Credit	[ ]	Grant	[ ]	Other

Total Project Cost:	20.00	Total Bank Financing:	20.00
Financing Gap:	0.00		

Financing Source	Amount
BORROWER/RECIPIENT	0.00
IDA Grant	20.00
Total	20.00

Expected Disbursements (in USD Million)

Fiscal Year	2015	2016	2017	2018	2019	2020
Annual	2.00	4.00	4.00	4.00	4.00	2.00
Cumulative	2.00	6.00	10.00	14.00	18.00	20.00

Institutional Data

Practice Area / Cross Cutting Solution Area

Energy & Extractives

Cross Cutting Areas

[ ] Climate Change
[ ] Fragile, Conflict & Violence
[ ] Gender
[ ] Jobs
[X] Public Private Partnership

Sectors / Climate Change

Sector (Maximum 5 and total % must equal 100)

Major Sector	Sector	%	Adaptation Co-benefits %	Mitigation Co-benefits %
Energy and mining	General energy sector	100		
Total		100		

☑ I certify that there is no Adaptation and Mitigation Climate Change Co-benefits information applicable to this project.

Themes

Theme (Maximum 5 and total % must equal 100)

Major theme	Theme	%
Financial and private sector development	Infrastructure services for private sector development	100
Total		100

Proposed Development Objective(s)

The Project Development Objective is to advance the preparation of selected priority regional energy projects in the Southern African Power Pool participating countries.

Components

Component Name	Cost (USD Millions)
Setting up the Project Acceleration Team	7.00
Project Preparation Funds	10.00
Analytical support to SAPP	3.00

Compliance

Policy

Does the project depart from the CAS in content or in other significant respects?	Yes [ ]	No [X]
Does the project require any waivers of Bank policies?	Yes [ ]	No [X]
Have these been approved by Bank management?	Yes [ ]	No [ ]
Is approval for any policy waiver sought from the Board?	Yes [ ]	No [X]
Does the project meet the Regional criteria for readiness for implementation?	Yes [X]	No [ ]

Safeguard Policies Triggered by the Project	Yes	No
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

Legal Covenants

Name	Recurrent	Due Date	Frequency
Appointment of External and Internal Auditors		23-Jun-2015	

Description of Covenant

The Recipient shall, not later than four (4) months after the Effective Date, engage an external auditor and an internal auditor (or engage a consulting firm performing internal audit functions), all with qualifications and experience and under terms of reference acceptable to the Association.

Name	Recurrent	Due Date	Frequency
Hiring of Env. & Social Safeguards Specialist for the Projects Acceleration Team		23-Aug-2015	

Description of Covenant
The Recipient shall, no later than six (6) months after the Effective Date, recruit a social and environmental specialist with qualifications, experience, and terms of reference acceptable to the Association.

Conditions		
Source Of Fund	**Name**	**Type**
IDAT	Project Implementation Manual	Effectiveness

Description of Condition
The Recipient has adopted a Project Implementation Manual acceptable to the Association

Source Of Fund	Name	Type
IDAT	Recruitment of key Projects Acceleration Team Staff	Effectiveness

Description of Condition
The Recipient has established a Projects Acceleration Team and engaged a Project coordinator, a procurement specialist and a financial management specialist for said Team, each with qualifications, experience, and terms of reference acceptable to the Association.

Team Composition

Bank Staff

Name	Title	Specialization	Unit
Howard Bariira Centenary	Senior Procurement Specialist	Senior Procurement Specialist	GGODR
Daniel Yaw Domelevo	Senior Financial Specialist	Senior Financial Specialist	GGODR
Mustafa Zakir Hussain	Senior Energy Specialist	Team Lead	GEEDR
Wedex Ilunga	Senior Procurement Specialist	Senior Procurement Specialist	GGODR
Kabir Malik	Young Professional	Young Professional	YPP
Blessing Manyanda	Disbursement Asst.	Disbursement Asst.	AFMZW
Maria Luisa Ana Esteban Meer	Temporary	Temporary	GEEDR
Elvira Morella	Senior Energy Specialist	Senior Energy Specialist	GEEDR
Priscilla Netsai Mutikani	Program Assistant	Program Assistant	AFMZW
Christiaan Johannes Nieuwoudt	Finance Officer	Finance Officer	CTRLA
MacDonald Nyazvigo	Finance Assistant	Finance Assistant	AFMZW
Maria Alexandra Planas	Consultant	Consultant	GEEDR
Wolfhart Pohl	Adviser	Adviser	GCFDR

Sanjay Srivastava	Lead Environmental Specialist	Lead Environmental Specialist	GENDR
Aki Tsuda	Senior Social Development Specialist	Senior Social Development Specialist	OPSOR
Mei Wang	Senior Counsel	Senior Counsel	LEGAM

Non Bank Staff

Name	Title	City

Locations

Country	First Administrative Division	Location	Planned	Actual	Comments

I. STRATEGIC CONTEXT

A. Regional Context

1. **Southern Africa is a large and diverse region with huge growth potential but also major development needs**. The Southern Africa region[1] spans a vast geographical area of nearly 9.09 million sq. km and is home to over 280 million people. The fifteen countries in the region are members of the Southern African Development Community (SADC), established in 1992 to promote socio-economic integration as well as political and security cooperation among its members. A challenging economic geography poses major constraints to expanding growth and shared prosperity in the region. Out of its fifteen countries, six are landlocked, eight have populations below 15 million people, six have economies smaller than US$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 of 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.

2. **Inadequate electricity access poses a major constraint to the twin goals of ending extreme poverty and boosting shared prosperity in Southern Africa**. Electricity access in Southern Africa is around 28 percent – below the continental average of 31 percent – and would barely reach 17 percent – the lowest rate among all Africa sub-regions – if South Africa were excluded. In Madagascar, Zambia, Lesotho, Tanzania, DRC and Malawi less than 20 percent of the population has access to electricity; DRC and Malawi report rates below 10 percent[2]. In all these countries expanding electricity access is critical to complement poverty reduction efforts and thus is at the core of their national development plans. In Malawi, an electricity access rate of 30 percent of the population by 2020 has been identified in line with the Government's goal to reach middle income status. In Zambia, the Government aims at expanding access to 66 percent of the population by 2030. In Mozambique, the national target is in the order of 50 percent of the population, to be reached by 2023.

3. **Access cannot be realistically expanded without first increasing power supply in the region**. Increases in connections to households and businesses require more electricity flowing into distributions systems. In DRC, the few customers that are connected to the grid experience power outages averaging more than three hours in length more than 180 days per year. Similarly,

[1] For the purpose of this project the Southern Africa Region is intended as the group of countries that constitute the Southern African Development Community (SADC), including Angola, Botswana, the Democratic Republic of Congo (DRC), Lesotho, Madagascar, Malawi, Mauritius, Mozambique, Namibia, Seychelles, South Africa, Swaziland, Tanzania, Zambia and Zimbabwe.

[2] Detailed power sector statistics for Southern African countries are presented in annex 6.

access goals in Mozambique critically hinge upon expanding electricity supply. In most cases, investments in generation capacity must be associated with investments in the rehabilitation and/or expansion of the national transmission network, to allow power to flow within the country or reach the regional market. Cross-border interconnections are equally critical to allow countries less endowed with energy resources to access more reliable and cost-efficient supply from neighbors. In the past years, deficient power infrastructure has affected poverty reduction and economic development in Southern Africa more than in other African regions. Going forward, the region may be losing up to 4 percent of GDP annually as a result of unmet power demand reducing economic investment, productivity and employment[3].

B. Sectoral and Institutional Context

The importance and the challenges of promoting regional integration in Southern Africa's electricity sector

4. **Despite the abundance of energy resources in the region, generation capacity remains inadequate to accommodate power needs.** In addition to rich thermal resources, the region has large hydro potential, located in DRC on the Congo River; in the Zambezi Basin countries of Zambia, Zimbabwe, Mozambique and Malawi; in central Angola, Northern Namibia and also in Tanzania. There is also large potential for solar and wind power. Nonetheless, the current total installed capacity (57.1 GW of which 51.7 GW is actually available) is not sufficient to accommodate current demand (nearly 53.8 GW), let alone future demand, which is projected to increase by 2-3 percent per annum, with peak loads reaching nearly 72 GW by 2025. Electricity demand has steadily increased in the last decade, largely driven by the mining and manufacturing sectors in South Africa and the BLNS countries (Botswana, Lesotho, Namibia and Swaziland) as well as in DRC, Zambia and Zimbabwe. Population growth, rural electrification and improved economic performance have also significantly raised residential demand. Conversely, excess supply capacity – which had been an enduring feature of the region's electricity sector over two decades – has been shrinking since 2007 due to the insufficient investments in new generation capacity. The low tariffs have compounded the problem by attracting large energy intensive users in the region and reducing the incentive for significant capital injection into generation projects from either the public or the private sector. As a result, the region has begun to face supply deficits. In 2007, South Africa started curtailing exports to Botswana, Lesotho, Namibia and Swaziland, which had relied and continue to rely on South Africa for a significant proportion of their energy supply. As of today, all these countries continue to be short of generation capacity to meet their domestic demand.

5. **Regional integration is the most efficient way to unlock the region's energy potential and can have great transformative impact**. Expanding electricity supply in line with projected demand growth over time and significantly increased rates of access involves a major scale up of generation and associated transmission capacity. The challenge is that the efficient option in many cases relies on large generation and transmission 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 making them economically viable.

[3] Southern Africa Power Pool Regional Transmission and Expansion Plan, 2009

The full integration of countries' power systems and the development of power trade can change the growth trajectory of the region. The average cost of supply in the region, which is predominantly based on thermal resources and notably coal[4], is nearly twice the cost of supply from its major hydropower sites. With integration, centers of high demand in the south, which are or are close to becoming energy constrained and are faced with overly high energy costs, would be able to import more cost-efficient, low carbon-based power from centers of supply in the north. Improved reserve margins and the possibility to access peak capacity of other countries would allow postponing, reducing or avoiding large and lumpy investments in domestic generation, greatly reducing the fiscal burden of power sector development. It is estimated that full expansion of regional power trade in the SAPP[5] and the displacement of thermal generation with cost-effective renewables-based generation could save the region $1.1 billion annually in power costs and reduce the long run marginal cost of power by 5 percent overall. The shift to cleaner energy would reduce regional carbon emissions by a significant 41 million tons annually. Electricity exports could become a large source of revenues for resource-rich countries and potentially account for a significant share of their GDP (over 6 percent in DRC).

6. **There are deep concerns that the regional generation and transmission investment projects that are critical to promote integration are not being developed**. Integration hinges upon large and complex generation and transmission projects, whose implementation is particularly challenging. Some projects are geographically located in more than one country, as is the case of hydropower projects using water bordered by multiple countries or most often of cross-border transmission projects[6]. Large-size generation projects, although often physically located in one country, make sense only in the context of regional power trade. National governments have generally demonstrated a low level of commitment to regional power projects and have tended to retain authority for design and investment decisions within their own boundaries. This is especially the case of generation. Perceptions around political instability and tensions between neighboring states have exacerbated the problem. Trade agreements including Power Purchase Agreements (PPAs) and agreements for wheeling power across countries may be difficult to secure because of poor institutional capacity, differences in countries' regulations and – importantly – if the parties involved are not perceived as creditworthy off-takers. Most PPAs in Africa require sovereign guarantees, but structuring one for cross-border projects is difficult from both an institutional and a financial point of view. Furthermore, mitigation measures for institutionalized risks such as foreign exchange or cross-border interconnectivity issues are highly complex and often require the involvement of several parties including multilaterals. As a result, few cross-border projects in the region have been implemented historically and there is concern in the region that strategic and economically important projects, and especially those that have been under discussion for a while, will continue to stall.

[4] Coal accounts for 80 percent of the existing generation capacity in the region.

[5] World Bank, Africa Infrastructure Country Diagnostic Study (AICD), "The SADC's Infrastructure: A Regional Perspective", 2011. The analysis covers the period from 2005 to 2015 and takes regional power trade to its fullest economic potential, assuming that there are no restrictions to cross-border exchange and that the necessary infrastructure can be built wherever it is required.

[6] World Bank Independent Evaluation Group, "The Development Potential of Regional Programs – An Evaluation of World Bank Support of Multi-country Operations", 2007.

7. **Lack of adequate preparation is a primary reason for regional energy projects not moving forward.** Project preparation entails all the activities needed to take a project from identification through concept design to financial close, including risk mitigation that can help securing financing and design and negotiation of PPAs and other agreements. Precision and quality in preparation is the main condition to attract financing, especially commercial financing. 'Bankable' projects are those in which enough time and money have been invested to establish commercial viability in a way that is sufficiently compelling to attract the private sector. Private sector investors have options and will seek other alternatives if preparation is not sound, even if the underlying project may appear sound. Adequate preparation of regional projects can cost anything between 2-5 percent of a project's capital costs and in some cases reach as high as 10 percent[7], an amount that in most cases is prohibitive for the host countries. Structuring large energy projects so they achieve financial closure also requires a complex set of skills, including on technical, financial, legal, regulatory, environment and social management, financial management, transaction and procurement aspects. Most of Southern Africa's countries are in the early stages of developing their expertise, and do not yet have a significant pipeline of experience in their own right. Inadequate preparation resulting in low bankability is now recognized as the main reason for regional projects not moving forward. The scarcity of skills for project preparation has also imposed large costs in terms of reduced confidence by the private sector and delays due to sub-optimal arrangements leading to eventual re-bidding or renewed preparation of projects.

The driving role played by the Southern African Power Pool (SAPP)

8. **Regional integration in the electricity sector is at the core of Southern Africa's development agenda and is pursued through the Southern Africa Power Pool (SAPP), the most advanced power pool in Africa.** Regional energy development is at the core of SADC's agenda, which has developed strategies and established dedicated agencies that together form a consolidated institutional architecture driving integration in the energy sector (see annex 8). The key actor is the SAPP created by the SADC in 1995, which is now the most advanced and organized of all power pools in Africa. The SAPP coordinates the power systems of twelve SADC countries (Angola, Botswana, DRC, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe), of which nine are operating members, namely 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 has a sound governance structure, with its key establishing agreements and operating guidelines signed by both members' governments and utilities. The governance structure is also robust and clear on the functions of the various SAPP bodies. In 2002, a Coordination Center was established in Harare, Zimbabwe as an arm of the Operating Subcommittee to monitor operations and transactions within the Pool, including controlling dispatching operations and serving as trading center for electricity auctions. The Coordination Center is the first body with responsibility for regional power market oversight and operation established in Africa.

[7] Bujagali Hydroelectric Project in Uganda cost US$15 million or 2 percent of overall project costs, Nam Theun II in Laos cost US$124 million or 9 percent of overall project costs.

9. **The SAPP is also the power pool with the largest volume of power traded and the only one with some form of competitive power market in Africa**. Unlike the other African power pools, the SAPP has active power trading. A Short-Term Energy Market (STEM) was introduced in 2001, which was replaced in 2009 by the Day-Ahead Market (DAM), a fully competitive auction market open to utilities, independent power producers, transmitters and distributors. Although STEM and DAM constitute notable innovations, the majority of energy sales and purchase continue to take place through negotiated bilateral agreements. As of today, there are 28 contracts for bilateral trading of power registered in the region, 18 of which entail long term provision of firm capacity, with an overall volume of power traded that is the largest among all Africa's regions. Power trade is driven by South Africa, due to its relatively large power needs within the region and more creditworthy status as a power off-taker. The recent update to the 2010 South African Integrated Resource Plan (IRP) 2010-30 includes significant emphasis on sourcing power from regional sources. Overall, power trade in the region is poised to increase. It is estimated that by 2025, exports could reach 62 TWh, a four time increase compared to 2010, and accommodating between 11 and 13 percent of total demand in the region[8].

10. **Further integration and market competition in the SAPP critically hinges upon increasing generation and transmission capacity**. In reality, full integration of multiple national electricity systems and a competitive regional power market with multiple buyers and sellers can take time to materialize and so far has been achieved in a few industrialized regions (i.e. Nord Pool in Scandinavia is probably the closest to this model). In Southern Africa, concerns over security of supply constitute a primary reason for countries opting to trade bilaterally based on long-term PPAs. The lack of adequate transmission infrastructure also physically prevents full integration and is an obstacle to freely trading power on the spot market. As a result, on average, STEM accounted for 5-10 percent of the energy traded in the region; DAM currently accounts for around 1 percent. Overall, ensuring adequate generation and transmission capacity are critical to enable further development of the regional power market based on bilateral trade and to creating more options for sale and purchase of power – thus leading to more competition in the region. The benefits attached to power trade – whether through bilateral contracts or through a more competitive market – and the prospects for trade in the near future make a strong case for regional generation and transmission projects. The focus of the SAPP has thus shifted more and more to the preparation and implementation of priority regional energy projects that further such regional integration.

11. **Priority regional energy projects have been identified by the SAPP**. The SAPP Regional Generation and Transmission Expansion Plan (SAPP Pool Plan) commissioned by the SAPP in 2001 and updated in 2009 has identified a detailed list of priority generation and transmission projects that allow accommodating rapidly rising electricity demand in the region at the least cost over the period from 2006 to 2025. In 2005, the SAPP started developing a thorough methodology (presented in detail in annex 9) to select, among the generation and transmission projects included in the SAPP Pool Plan, those that should be given highest priority by member countries and promoted for investment. As a result, 21 priority generation projects have been selected, 15 of which are based on low carbon sources and alone account for 12,500 MW of new generation capacity, more than a third of what is estimated by the SAPP Pool Plan

[8] Southern Africa Power Pool Regional Transmission and Expansion Plan Study 2009

to be needed by 2025 to accommodate a regional demand growth of 3 percent per year. Typical projects include Inga 3 in DRC – which is critical to support the least-cost rapid increase of electricity access in the country and feed electricity exports to the SAPP region – and development of key hydropower sites in Mozambique and Zambia – which would allow accommodating the national access targets as well as demand by neighboring countries. The list of priority projects identified by the SAPP also comprises 12 transmission projects, including those to connect non-operating members of the SAPP (i.e. Zambia-Tanzania and Mozambique-Malawi Interconnections), relieve congestion (i.e. Kafue-Livingston Upgrade in Zambia), or associated to generation projects (i.e. Mozambique Backbone – STE Project – connecting a key Zambezi Basin hydropower region downstream of Cahora Bassa to southern Mozambique and South Africa). The Bank's engagement with these critical regional generation and transmission projects would complement support to electricity access expansion in the concerned countries, which is best pursued through the country portfolio. In Malawi, Zambia, Tanzania and Mozambique, the Bank is financing projects that support grid-based access through the reinforcement and/or the extension to un-served areas of the electricity network; off-grid access especially in rural areas through conventional and renewable energy resources and technologies; as well as reform programs to boost the performance of the power sector and its capacity to provide reliable and affordable electricity services to a growing population.

12. **The identified projects have been endorsed by SAPP member countries at the highest level.** In May 2013, the SADC Energy Ministers formally approved the identified priority projects and committed to fast-track their implementation. They are also consistent with the investment priorities set by the Programme for Infrastructure Development in Africa (PIDA) of the African Union. Under the PIDA, a Priority Action Plan (PIDA PAP) has been established to prioritize key projects, and notably large scale, multi-country, 'transformative' public projects. The Plan includes eight priority regional energy projects (annex 11) which largely overlap with those selected by the SAPP. The projects have been presented to potential investors at several investor conferences in Africa and elsewhere.

13. **Advancing regional energy projects has become a top priority to the region and is being promoted as a truly regional initiative with the SAPP playing a driving role**. In addition to identifying priority regional investments, a regional authorizing environment including governance arrangements to seek consensus and authorization at government level on the individual projects and a clear mandate for the SAPP to advance such projects, is now in place as set out by the 2008 SADC Communique[9]. Following the 2008 SADC Communique, the SAPP Executive Committee expanded the functions of the Coordination Center to include project coordination on a project-by-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. In addition, the Coordination Center has received grant funding for preparation and packaging of specific projects from 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 (see annex 13).

[9] *SADC Energy Ministers Task Force Meeting 21 February, 2008, Gaborone, Botswana.* This Communique was the output of work of a Task Force of Energy Ministers from Angola, Namibia, South Africa and Zimbabwe, assisted by their utilities, the SADC Secretariat, the SAPP and RERA.

Further deliberations have strengthened the authorizing environment and the role to be played by the SAPP. At the SADC Energy Ministers meeting held in May 2013, the Ministers reiterated that the function of project preparation and implementation should be formally 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 formally approved the establishment of a Projects Acceleration Team (PAT) under the SAPP Coordination Center, with a mandate to carry out project preparation support at regional level.

14. **Supporting preparation of regional projects as a regional initiative is a more efficient and effective choice.** A regional approach to energy development allows centralizing decision making and achieving a more rational planning of generation and transmission investments in the region. It is also more suitable for the development of regional energy resources and infrastructure, which entail large positive externalities and benefits to be shared among multiple countries. The scale of resources and skills needed for preparing regional energy projects can be better leveraged at the regional level. Obtaining funds is not straightforward and implies agreements with each of the individual countries involved. Entrusting regional organizations with the implementation of grants for project preparation greatly facilitates the process. It centralizes management of funds, procurement and financial management activities, as well as coordination of consultants. Carrying out preparation activities at a regional level is also more efficient than attempting to cultivate the scarce skills available in the individual countries repeatedly at the national level. Project preparation at the regional level allows for building and disseminating best practices, learning from mistakes and leveraging the momentum from successful projects across the region. An IEG report completed in 2007 also concluded that a regional approach better suits the implementation of cross-border projects especially when these involve: (a) management of shared resources (such as river basins bordered by multiple countries); (b) need for harmonization of policies/regulations among multiple countries (such as for interconnection of countries' power systems within a power pool); or (c) development objectives shared by multiple countries.

15. **Working with a regional, well established and highly credible institution such as the SAPP presents major advantages**. The SAPP is uniquely positioned to drive regional energy projects. As a regional organization created by the SADC, the SAPP (as well as its Coordination Center) has the same legal status as similar technical organizations. Its operations benefit from established procedures and precedents already agreed under the SADC Treaty and the related protocols. SAPP's strong day-to-day relationships with all the utilities in the region, which form its board and management committees, suggest more likely ownership at national level, where projects will ultimately be implemented. The SAPP has strong convening authority among its members and can play a key catalytic role in bringing together national and regional stakeholders. It is heavily involved in the coordination of sub-regional power planning and now has an established role in supporting the development of regional projects and especially interconnections between its members' respective networks. Its Coordination Centre is a credible and trusted partner to the utilities in the region.

The World Bank's response and added value

16. **The proposed Project is intended to address the main bottlenecks in the delivery of truly transformational regional energy projects.** The Project supports Southern Africa's priorities for energy development and its regional approach to the preparation and implementation of critical energy investments. The Project's design is intended to respond to the region's request for support on two main fronts: first, help the SAPP become a true catalyst for priority regional energy projects consistent with the mandate and the role it has been attributed by the SADC; and second, provide much needed financial resources to advance project preparation. Analytical support under the Project will also be deployed to enhance regional planning capacity, ensure better selection and coordination of investments, increase project sustainability as well as improve information available for decision making. Delivering this package of support through the SAPP is seen as highly effective and efficient compared with alternatives considered.

17. **The Project can bring significant added value compared to existing project preparation facilities.** Regional energy projects generally require large financial and technical support from the public sector to make them bankable and able to attract private sector participation. In the SAPP region, grant funding for preparation is therefore critically important to support the public sector. Lack of adequate funding is reflected by the experience of many of the major energy projects in Southern Africa that have struggled or are struggling to reach financial closure. Support under the existing project preparation facilities (PPFs) is not sufficient. Most of the PPFs are relatively small in size and highly fragmented. They have focused only marginally on early-stage preparation, which is paramount for complex projects, and to a limited extent on transaction support to governments/the public sector in negotiating with private sponsors. Overall, the existing PPFs appear to be better suited to support preparation of small and private sector-driven projects. The proposed operation is not actually directly comparable to existing PPFs as it offers significantly more. In fact, its structure allows the region to efficiently tap into IDA and potentially other large sources of funding in a form that is simply not an option with the existing PPFs. Working directly with the SAPP provides political legitimacy, acceptability by the public sectors in the member countries and access to the SADC Secretariat and SADC energy ministers as required. The SAPP already interfaces with several donors, and thus it is entirely feasible for a project embedded with the SAPP to leverage other donors. As implementer of the Project, the SAPP has access to the funds envisaged for the preparation of priority regional energy investments, which saves the concerned countries from applying for financing. Perhaps particularly importantly, a source like IDA is among the few that can mobilize financial support at the scale required for large transformational energy projects. IDA funding also comes associated with the World Bank's large operational experience and familiarity with the region's power sectors, which can ensure a more effective deployment of resources. African regional organizations and individual countries, as well as regional studies[10], have recently been advocating that large funding sources such as IDA and other multi-lateral development banks' funds are made actively available for financing preparation of transformational projects.

[10] Infrastructure Consortium for Africa (ICA): "Assessment of Project Preparation Facilities for Africa" Cambridge Economic Policy Associates, 2011. Report prepared by ICA upon request by the Development Working Group of the G20.

18. **The proposed Project will ensure a more efficient deployment and greater impact of IDA and complements other WBG efforts.** IDA already carries out a significant amount of preparation activity on a piecemeal basis. Project preparation is embedded in nearly all IDA-funded energy projects or is funded through self-standing technical assistance operations, including most recently the Inga 3 Basse Chute and Mid-Size Hydropower Development Technical Assistance Project (Inga 3). In some countries IDA is a major if not the sole source of funding available for project preparation. By supporting preparation at the regional level, the proposed Project constitutes a more efficient form of deployment of IDA than replicating efforts at the level of individual projects and countries. It is also a very impactful use of IDA. Project preparation funds to be allocated under the Project would be barely enough to install a mid-size transformer serving a country's urban area. If used for project preparation, they can leverage investments from the private sector and other donors in an amount that is at least fifty times larger. Through this Project, IDA is also poised to become a key partner of the SADC, the SAPP and their member countries in delivering the high priority regional energy agenda. It can gain a stakeholder role in the regional energy dialogue and more opportunities for financing transformational energy projects. Overall, with a relatively small amount of funding, the proposed Project promises to greatly strengthen the positioning of IDA to support projects in the Southern Africa region. The Project also complements other WBG initiatives. For instance, the Global Infrastructure Facility (GIF), currently being planned, would be a World Bank based and World Bank executed Multi-donor Trust Fund able to offer one-off specific support predominantly to Middle Income Country projects that may link to or have dependencies with the IDA SAPP program supported projects (that are located in or are linking IDA countries). Crucially, these are not substitutes. This IDA operation will be implemented by the SAPP and will focus on building a regional team that will make use of IDA and other donor funds to support a number of regional priority energy projects. This complements well with other WBG country-specific or project focused supports.

19. **The World Bank has significant experience in supporting regional energy initiatives and helping promote integration in the energy sector in Africa**. The World Bank's support has spanned from technical assistance for project preparation, to institutional and capacity building targeting nascent regional bodies, to financing of major regional energy projects and notably cross-border interconnections. In East Africa, the Bank has supported the Nile Equatorial Lakes Subsidiary Action Program (NELSAP) – an investment program under the Nile Basin Initiative (NBI) – and financed feasibility studies and provided advisory and transaction support for key regional projects including the Kenya-Uganda Interconnection and the Regional Rusumo Falls (hydropower) Project. In addition, the Bank has supported the Eastern Nile Subsidiary Action Program (ENSAP) – also established under the NBI umbrella – by financing the construction of the Ethiopia-Sudan Interconnection. The Bank is also a financier of the Ethiopia-Kenya Interconnection, a key link in the transmission backbone of the Eastern African Power Pool, and has been approached by Rwanda and Ethiopia to support power trade between the two countries. In West Africa, the Bank has provided extensive assistance to the West African Power Pool (WAPP) based on a multi-year programmatic framework approved in 2005. The fourth phase of this program – the West African Power Pool Côte d'Ivoire, Sierra Leone, Liberia, and Guinea (CLSG) Power Interconnection Project – includes extensive technical assistance to support project preparation; strengthen the capacity of WAPP bodies and notably the Coordination Center for power pool planning and management; as well as facilitate the technical

integration of the WAPP network. The DRC Inga 3 and Mid-Size Hydropower Development Technical Assistance project is also a notable example of preparation support for a transformational project, which includes financing for feasibility studies, transaction and procurement advisory services to structure the project and support to establish a dedicated agency to oversee project development.

20. **The Project will provide a platform to channel donor's support.** A number of donors are committed to support preparation of regional energy projects but have not found a coordinated modality to date. The implementation structure envisaged under the proposed Project, including the establishment of a professional team under the SAPP, ownership by the region, clear procedures for identifying and approving investments eligible for preparatory support and adequate financial management and procurement procedures, will provide a suitable regional 'platform' to channel funding from multiple donors. IDA's established role and the Project's explicit and transparent form of use of funding further increases opportunities to leverage matching support. The 'platform' modality is more efficient than other options. The experience of cross-border projects suggests that trying to arrange co- or parallel financing by different sources on a project-by-project basis may impose prohibitive transaction costs and insurmountable coordination hurdles. Conversely, the platform structure will allow the SAPP to work more flexibly with a number of partners and well beyond the duration of this Project. Once established and operational, the platform may provide a model for scaling up and replication in other Regional Economic Communities in Africa. Development partners have indicated their commitment to coordinating support to project preparation at regional level and have expressed tangible interest in the platform to be established through the Project. The SAPP Coordination Center has held positive discussions with many partners, including: Norway, Sweden, the EU, the African Development Bank and the US State Department.

C. Higher Level Objectives to which the Project Contributes

21. **The Project is designed to contribute to the World Bank's twin goals of ending extreme poverty and boosting shared prosperity**. In several Southern African countries, low electricity access at the household level is a main factor in their inability to improve their livelihood. The lack of electricity constrains the delivery of the most basic social services and causes inequality and exclusion within society, especially among the poorer groups. This linkage between energy access and poverty is internationally accepted. At the Rio+20 United Nations Conference on Sustainable Development (held in 2012), world leaders stated that: *"We are all determined to act to make sustainable energy for all a reality and, through this, help to eradicate poverty and lead to sustainable development and global prosperity."* At present, insufficient and unreliable electricity supply is also affecting productivity and investment climate in Southern African economies, reducing opportunities for attracting investments, expanding production and creating jobs in the process. By advancing preparation of priority regional energy projects, the proposed Project will ultimately contribute to unlocking the region's energy potential and ensure expanded, reliable and sustainable electricity services to the benefit of Southern African people and firms. Under the new Strategy, the Bank Group is seeking to identify and support engagements with transformational potential, which is clearly at the heart of this Project. The Strategy also advocates working with partners and mobilizing a coordinated donor support to client countries. This is exactly one of the objectives of the regional platform for project preparation envisaged under this Project, which is expected to leverage and coordinate financing

by multiple donors. By increasing the bankability of regional projects, the proposed Project will enable larger private investments in energy, consistent with the World Bank Strategy's pillar of supporting the private sector.

22. **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.** The Project is consistent with 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 (and is, in fact, specifically designed to advance these). The Protocol on Energy and all other SADC's strategic plans for energy development target the coordinated implementation of energy projects that can drive regional integration and economic growth in Southern Africa.

23. **The Project is consistent with the World Bank's Regional Integration Assistance Strategy for Sub-Saharan Africa (RIAS)**. The first pillar of RIAS concerns regional infrastructure and identifies the development of stronger and better-connected infrastructure platforms as a means to unlock economies of scale, sharpen competitiveness, and support Africa's agenda for economic growth. Supply reliability is one of the three areas of focus for the Bank's assistance in the development of regional infrastructure under the RIAS. The Project also meets the three key criteria for regional projects: (a) involvement of more than two countries; (b) economic benefits that will accrue to several countries; and (c) evidence of regional ownership and commitment of the participating countries along with the provision of a platform for policy harmonization in power sector development. The consistency of the proposed Project with the conditions for IDA Regional Grants is explained in detail in Annex 12.

II. PROJECT DEVELOPMENT OBJECTIVES

A. PDO

24. The Project Development Objective is to advance the preparation of selected priority regional energy projects in the Southern African Power Pool participating countries.

B. Project Beneficiaries

25. Direct benefits to end-consumers from the proposed Project are difficult to capture due to the upstream nature of the support that will be provided. Indirect beneficiaries of the Project will be the current and future electricity consumers of the member countries of the SAPP, who will eventually benefit from expanded, more reliable and more cost-efficient electricity supply.

26. The direct beneficiaries will be the stakeholders of priority regional energy projects, including governments and government agencies, regional institutions, and potential investors and financiers (multilateral, bilateral and private sector). The higher quality of project preparation, including a thorough assessment of project feasibility along all key parameters, will reduce asymmetry of information, lower transaction costs and enhance the overall robustness of investments. All stakeholders will be enabled to make more informed decisions and face less

risky trade-offs. Government agencies will also benefit from increased planning capacity. Furthermore, the Project will provide multilateral and bilateral donors interested in supporting project preparation in the region with a more efficient vehicle to channel their support and the possibility to rely on an established, professional team such as the PAT.

C. PDO Level Results Indicators

27. The key indicator for the PDO level results is the following:
(a) Priority regional energy projects whose preparation is advanced (number).

28. 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 studies/activities for priority regional energy projects completed (number); and
(c) Regional analytical studies completed (number).

III. PROJECT DESCRIPTION

A. Project Components

29. The Project has the following three components (a detailed project description is attached as annex 2):

30. **Component A: Setting up the Projects Acceleration Team (US$ 7 million)**. This component will finance the establishment of a Projects Acceleration Team, a high caliber core team that will spearhead the preparation of the regional projects identified as priorities to the 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 advice; environmental and social management; procurement; financial management; etc.). The PAT is expected to be a mixture of senior and mid-career specialists with strong track records of project development using public and private funding. The PAT is also expected to be able to establish strong working relationships and interact effectively with the broad range of stakeholders and financiers concerned with any specific project, thereby becoming a focal point for project preparation in the region.

31. The PAT will assess and adjust to the type of role it needs to play on a specific project, which may range from taking the lead on selected or all preparation activities to providing support to the concerned agencies and ensuring that preparation effectively serves the needs of project stakeholders. It will be important to maintain flexibility on what preparation work is carried out – as different project structures are amenable to different allocation of preparation costs and activities between the public and private sectors. 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.

32. A Project Preparation Advance (PPA) is being used to hire key staff for the Projects Acceleration Team (a Project Coordinator, a Financial Management Specialist and a Procurement Specialist), provide training on Bank fiduciary issues, set-up the PAT office (including office equipment and operating expenses for the first six months of project implementation) and procure the consultants for the preparation of the Environmental and Social Management Framework.

33. **Component B: Project Preparation Funds (US$10 million).** The funds in this component will be managed by the PAT and will 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 use of funds as long as they are clearly used to improve the quality of project packages and enable sponsors and credit committees of banks 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. All funds will be used for preparation and no funding will be used to finance infrastructure works.

34. **Component C: Regional analytical support (US$3 million).** This component will engage with the SAPP members on regional planning issues (most likely working closely with the SAPP Planning Sub-committee) and will support critical analytical work that the SAPP judges important for advancing preparation of critical projects. This includes building a solid knowledge base for investment decisions and helping ensure long-term sustainability of investments. A key task will be the update and revision of the SAPP Pool Plan with a view to adjust investment decisions to the changing conditions of the regional power market and isolate projects that remain priorities under all likely circumstances. 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, including an assessment of power trade expectations and potential; (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. A key study will concern the link between water use and energy development in the region. The exact number and scope of these studies remain to be defined. The SAPP will be expected to take a proactive role, together with other stakeholders in the region, in determining the need for and subsequently advancing of important studies. Outputs of such studies could be provided to the SADC Secretariat as part of the information flow to SADC Ministers with a view to informing policy decisions.

35. The PPA is being used to advance the update of the SAPP Pool Plan and some of the associated studies identified by the SAPP. Funding under the Project 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.

B. Project Financing

36. The Project will be financed by an IDA grant.

Lending Instrument

37. The lending instrument for the project will be an Investment Project Financing (IPF). The Southern African Power Pool will receive an IDA grant in the amount equivalent of US$20 million.

Table 1: Project Cost and Financing

Project Components	Project cost	IBRD or IDA Financing	IBRD or IDA Financing as % of total
1. Setting up and running of the Projects Acceleration Team.	US$7m	US$7m	100%
2. Project preparation	US$10m	US$10m	100%
3. Regional analytical support	US$3m	US$3m	100%
Total Project Costs	US$20m	US$20m	100%
Total Financing Required	**US$20m**	**US$20m**	**100%**

C. Lessons Learned and Reflected in the Project Design

38. Lessons from the World Bank's experiences in preparing cross-border energy projects as well as in supporting regional energy institutions and initiatives have informed the design of this Project. Detailed lessons learned are presented in table 2.

Table 2: Lessons Learned

Component/lesson	*Reflection in the design of the proposed Project*
Availability and adequacy of grant funding through existing PPFs. Existing PPFs are not delivering adequately on what is required. The main reasons include: (a) funding inadequate compared to preparation resource requirements (especially for mega/transformative projects) and many facilities are currently looking for replenishments; (b) early stage preparation activity receives least attention from PPFs, particularly for larger, more complex projects requiring private sector involvement; (c) support for mid-to-late stages of private sector-originated projects, transformative projects and public sector-originated PPP projects is also inadequate; and (d) interface problems between different PPFs as well as non-standardized application processes creating significant transaction costs.	The allocation to component 2 is intentionally significant in size to accommodate the different and likely large funding needs associated with preparation of large and complex cross-border projects. The involvement of significant IDA funding is also expected to provide signaling to prospective financiers and investors of the quality and soundness of preparation. The type of preparatory support provided under the Project is kept flexible, since different projects typologies (mega vs. small projects; generation vs. transmission; national vs. cross-border) and different financing structures (public vs. private financing) entail diverse preparatory activities and allocation among project stakeholders. Preparation support may span from early stage activities such as feasibility studies, to mid- to late-stage activities such as transaction advisory,

Existing project preparation facilities often have their own priorities (not necessarily aligned with the region and often linked to technologies) and their own application processes.	procurement support etc. Under this Project, regional priority projects will be readily able to access preparation funds (assuming in line with criteria for support) without the need for various application processes to third parties.
Centralized implementation of preparation funds. Obtaining funds for preparation of regional projects is not straightforward and normally requires agreements with the individual countries which may create delays to the preparation schedule. The involvement of a regional organization greatly facilitates the implementation of grants for preparing regional projects.	Once a priority project is identified and endorsed based on the process described in section IV, preparatory funding under component 2 is made readily available at a regional level, with less need to work through a number of government agencies. The establishment of the PAT will centralize the management of funds, procurement and FM activities and supervision and coordination of consultants. Project preparation at regional level will allow to mobilize and efficiently allocate international expertise and to build and disseminate best practices.
Project preparation skills. The lack of critical skills for project preparation, which span a wide and complex range of competencies, is a key impediment to packaging bankable projects.	The PAT will be composed of top class specialists who will be hired – as required – to fill each of the key functions required for preparation of large and complex regional projects.
Authorizing environment. A clear, unified governance structure must be in place to approve priority projects and ensure that they move forward. Regional bodies usually have to go to some higher body for approvals which could be complicated and time consuming if the authorizing environment is not clearly established.	The choice to work with SAPP has been made because of the existing authorizing environment at regional level, which entrusts SAPP and its Coordination Center with a clear mandate to fast-track preparation of priority regional energy projects. Priority projects have been clearly identified and endorsed at the highest levels. Also, implementation arrangements for the Project are designed so as to provide a formal mechanism through which countries reach decisions in a timely and coordinated manner.
Project Ownership. Strong ownership at national level by both government and utilities is critical for sustainable project implementation.	Implementation arrangements include clear provisions to secure formal commitment by the countries concerned with the projects selected for support (with involvement of the SADC Secretariat as necessary). In addition, as part of its assessment of a project's feasibility, the PAT will evaluate incentives and risks for all parties involved and ensure that project preparation facilitates a balanced allocations of benefits and risks.

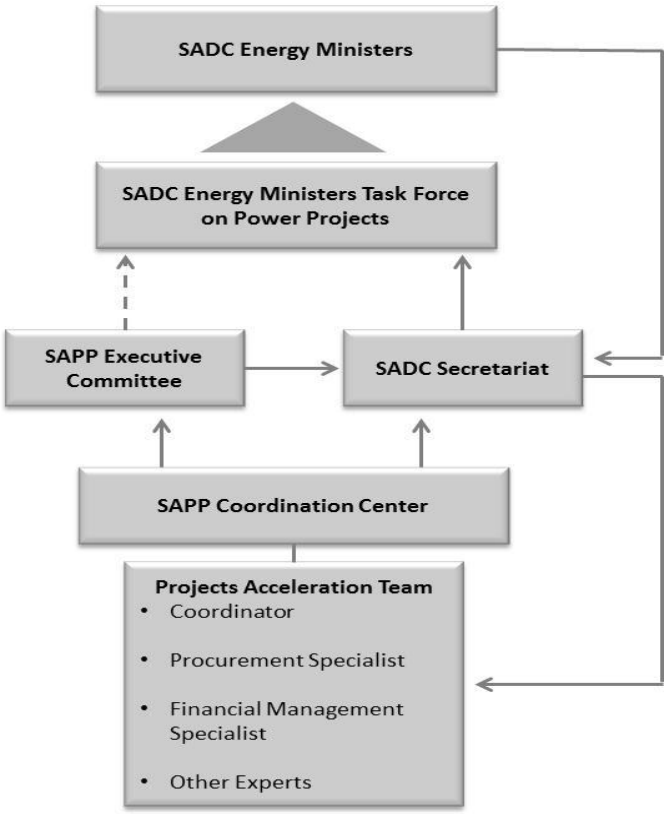
IV. IMPLEMENTATION

A. Institutional and Implementation Arrangements

39. The Southern African Power Pool will implement this Project through the Coordination Center. The Bank has conducted legal due diligence of this agency and found that the SAPP Coordination Center meets the Bank's legal requirements for being a recipient of regional IDA funding and for serving as project implementing entity.

40. The implementation arrangements for this Project will, to the extent feasible, fit into the governance structure to advance priority regional energy projects that was approved by Energy Ministers and set out in the 2008 SADC Communique. The Project's implementation process consists of the following key steps: (a) identification of regional energy projects to be considered for preparatory support; (b) screening and selection of these projects; (c) authorization process; (d) IDA's no-objection; (e) agreement on terms on which the funds will be provided; and (f) implementation of preparatory activities. Project's implementation arrangements are summarized in figure 1.

Figure 1: Project implementation arrangements



41. **Identification and selection of projects.** The identification of a project can be initiated by the PAT, concerned countries' governments and/or utilities, or project sponsors. For any project not directly identified by the PAT, interested stakeholders make a request to the SAPP Coordination Center or directly to the PAT, which is formalized by filling out a form. In all circumstances, the PAT assesses the level of priority of the project and its eligibility for receiving preparation support. The project may have been already identified as a priority by the SADC and included in the list presented in annex 9, in which case the assessment is somewhat straightforward. If not, the PAT verifies that the project does qualify as priority based on the selection criteria also detailed in annex 9. The PAT also checks that the project and preparation tasks fit within the eligibility criteria for financing of IDA and of any other donors that may join the platform and offer preparatory support. This is an important step – especially as the donors will eventually be approached for no-objection, and it will be important for the SAPP to identify a project that may not have donor support prior to the process of receiving regional political

authorization.

42. **Authorization process.** Upon completion of this screening process, the Coordination Center informs the SAPP Executive Committee and the SADC Secretariat, which help bring the project to the attention of the SADC Energy Ministers. At this stage an important role may be played by the SADC Energy Ministers' Task Force, currently composed of the energy ministers of South Africa, Mozambique, the Democratic Republic of Congo, Botswana and Zimbabwe. Where the SADC Secretariat deems the need for greater political buy-in, the Task Force takes the lead in ensuring full political authorization to move ahead with the project with support from the PAT. The Task Force calls in and leverages other Ministers of Energy as deemed appropriate. An already established requirement for regional energy projects in the SADC region is that a Memorandum of Understanding is required between all relevant governments (all countries where the project will be physically located). This requirement will be enforced. If the project is located in only one country, the interested country needs to send a consent letter to the SAPP.

43. **IDA's no objection.** Once the decision to move ahead is taken, the SAPP Coordination Center seeks a no-objection from the relevant donors (initially IDA). This no objection is required for the PAT to commence activities, and may be reasonably withheld if the relevant donor has concerns (including, but not limited to governance issues) about the project. Regional energy projects proposed for support shall be carried out only in the territory of countries eligible to receive financing out of the resources of IDA or IBRD, provided that at least one of the participating countries is eligible to receive financing out of IDA resources. Strict criteria for use of IDA are not presented at this stage – as all projects and circumstances are different and it is valuable to preserve flexibility for the Bank to exercise discretion. However, it is clear that the Bank would not fund activities that IDA is not allowed to fund (e.g. nuclear power, IBRD only country projects, etc.) and would strictly follow the World Bank strategy (for instance, regarding coal projects) and World Bank due diligence regarding potential safeguards and integrity issues.

44. **Agreement of terms on which funds will be provided**. The next important step is the negotiation and agreement of terms on which the services of the PAT will be provided. Whilst the PAT is proposed to be funded from IDA grants, and other donors are expected to join the funding of project preparation, in most cases the SAPP Coordination Center will seek repayment either in cash or in-kind. Cash repayment could be structured by keeping a full record of preparation costs incurred by the PAT for a particular project and seeking to cover these costs as part of the overall cost of the project (i.e. including construction and implementation costs). When there is a payout to cover the project costs (for instance as part of a private sector/commercial financial closure process), there would also be a payment to SAPP for the costs incurred by the PAT. Repayment in cash would be the preferred option. In some cases, however, it may be that only in-kind repayments are possible. Such repayments will still be preferred to no repayment. The options for the in-kind form of the payment may depend on factors such as the type of asset being prepared and whether it is a public or private sector led project. For transmission infrastructure, the repayment could, for instance, consist of an allocation of rights to transmission capacity. In the case of generation, there may similarly be an option for power (or payment from future sales of power) to be allocated. In all cases, funds received are expected to be re-used by the PAT to support further project preparation activities.

Upon reaching an agreement on repayment, the SAPP Coordination Center sends a letter to the project implementers, which includes the understanding of preparatory support, outputs and timeline.

45. **Implementation of preparatory support.** The preparatory support so agreed and authorized is implemented by the SAPP Coordination Center through the PAT. Once a new project is selected and approved for preparatory support, the PAT is assigned a budget approved by the Manager of the SAPP Coordination Center and subsequently engages on tasks and hires consultants as appropriate.

46. The staff of the PAT will be built up over time. Initial hiring will focus on core staff needed to implement donor funds and to advance initial discussions regarding the preparation of projects. It is envisaged this will consist of three staff - a Coordinator, who is an experienced subject matter expert that can build up initial confidence in the work of the PAT– a Financial Management Specialist and a Procurement Specialist. Additional staff will be hired based on the needs of the projects selected for support. All PAT members will report to the Coordinator who, in turn, will report to the SAPP Coordination Center Manager. The PAT will generate all reporting required to keep the SAPP, the SADC Secretariat, SADC Ministers and relevant donors informed.

47. Over time, it is expected that further donors will provide preparation funding for use by the PAT. Whilst eligibility criteria for accessing and using the funds may vary, it is expected that support by all donors will fit into the PAT mode of operation.

B. Results Monitoring and Evaluation

48. The SAPP Coordination Center will have the overall responsibility for monitoring and evaluating project components/activities in accordance with the indicators included in the Results Framework and Monitoring attached as annex 1. The Coordination Center will be able to call upon the PAT staff and will rely on data and inputs from the PAT in the preparation of quarterly progress reports and annual reviews. No later than 45 days after each quarter, the Coordination Center will submit quarterly progress reports to the Bank covering all project activities, including a procurement and financial summary report. Annual reviews, the first one to take place within twelve months after effectiveness, will provide detailed analysis of implementation progress toward achieving the project development objectives and include an evaluation of the financial management and a post-review of procurement aspects.

C. Sustainability

49. This Project builds on existing institutions, an established governance structure and a mandate for the SAPP that pre-dates discussions regarding this World Bank operation. The SAPP draws its legitimacy from its member utilities, which represent the entire region, and its assigned role within the SADC. The proposed operation will serve to operationalize and develop the SAPP's role in fulfilling its mandate in advancing regional energy projects.

50. The methodology developed by the SAPP to select priority regional energy projects constitutes an important tool to screen new potential projects and will help countries in the

region make more efficient choices. The revision of the SAPP Pool plan will provide a longer-term roadmap to investments decisions, including options to adjust investment priorities if regional integration does not materialize as expected.

51. The Project is designed to enable other donors to easily join in supporting the SAPP and the PAT. It is therefore seen very much as a SAPP regional platform for the long-term, with IDA providing a certain amount of funds but other donors also likely to offer support in future years, which will enable the SAPP to raise funds over time for further project preparation activities. Also, repayments for the PAT's services from project sponsors – where possible and based on methods that best fit the specific circumstances of each project – promise to raise the sustainability of the PAT and its activities.

V. KEY RISKS AND MITIGATION MEASURES

A. Risk Ratings Summary Table

Risk	Rating
Stakeholder Risk	**H**
Implementing Agency Risk	
- Capacity	**S**
- Governance	**M**
Project Risk	
- Design	**S**
- Social and Environmental	**M**
- Program and Donor	**M**
- Delivery Monitoring and Sustainability	**S**
Overall Implementation Risk	**S**

B. Overall Risk Rating Explanation

52. This Project has been assessed to have an overall risk of ***Substantial*** in consideration of the complexity of the regional priority projects likely to be supported under the proposed operation. Their preparation may be derailed by a number of factors – especially risks inherent to the concerned countries – that are beyond the control of the Project. There will also be a variety of vested interests involved with such projects that may not always work towards successful project preparation. A detailed analysis of these risks is provided in Annex 4. The potential major risks and possible mitigation measures are discussed below:

53. ***Stakeholder risk:*** The new role attributed to the SAPP Coordination Center and the PAT may raise concern especially on the part of individual countries, which may fear losing authority in selecting and implementing projects. This may be especially the case for generation investments, which countries are keen to keep under control at national level. Member utilities may also be suspicious that the PAT may be captured by one or a subset of members. ***Mitigation:*** The SAPP has been attributed a mandate to champion preparation of regional priority energy projects by SADC Energy Ministers. SAPP countries share an understanding on the critical energy projects that need to be moved forward. The PAT will work with and support

member utilities. The extent of its role will be at the discretion of the member utilities involved (and their political leadership). The PAT will be developed in a transparent manner and will report to the SAPP Coordination Center (and ultimately the SAPP Executive Committee) which should ensure a balanced approach by the PAT to the different member countries.

54. The Project is intended as a platform for a number of development partners to coalesce around – to offer consistent and coordinated support to the region on project preparation. There is a risk that this does not actually happen – and other multi-laterals and bilaterals continue to provide uncoordinated support. ***Mitigation:*** The Bank team has carried out significant consultation during preparation to ensure that the project is well understood by regional stakeholders, that this effort is additional, and that there is opportunity for other bilateral and multi-lateral donors to join this effort going forward. Formal outreach to other development partners will be led by SAPP to show that this is a SAPP driven initiative. The SAPP has already reached out to a number of its traditional development partners and has received positive feedback.

55. ***Implementing Agency risk:*** There is a risk that funds are not used appropriately or advances in projects are not big/impactful. ***Mitigation:*** Decisions over use of funds will be driven by experienced and qualified PAT staff to be hired. A careful screening of projects will help to minimize the risk of projects not advancing sufficiently. A key task for the PAT and the SAPP Coordination Center will be the initial screening step, which shall assess, among the other aspects, the level of government support and the national incentives to develop such projects. Selection shall prioritize the projects with a higher chance of successfully completing preparation/reaching financial closure so as to ensure a few quick wins that can help establish the role of the PAT. In addition, the Bank team will coordinate closely with relevant CMUs throughout project preparation to monitor potential risks and develop mitigation strategies. The Bank team will also remain closely engaged with the individual countries on a bilateral basis, leveraging the relationships established through the extended energy portfolio in the region and ensuing country dialogue. On use of funds, there will be significant transparency (including monitoring and reporting to the Bank by the PAT staff) and oversight from the SAPP Executive Committee. Qualified fiduciary staff (including FM and Procurement Specialists) will be hired to work for the PAT to ensure funds are used in line with intent and are properly monitored and reported on.

56. ***Project risk:*** It will be critical to the success of the Project that the PAT is seen as a credible ('go-to') team within the region. There is a risk that experts of the appropriate caliber will not be available. This being a regional project, there is a further risk that the choice of the location for the PAT could be compromised by political considerations – and this could have an adverse impact on the quality of the PAT. ***Mitigation:*** Great care will need to be taken in hiring staff for the PAT. The location and remuneration package will need to be set carefully. In addition to being an attractive place to work for top caliber professionals, the location will need to enable easy access to regional developers and commercial banks and good transport access to the rest of the region for regular meetings with SAPP utilities and ministries. The importance of attracting the right caliber of staff and having the right location for the PAT has been made during a number of discussions and indications are that these issues will be taken seriously.

57. There is also a risk that the amount set out under Projects' component B proves to be inadequate fairly quickly – as individual projects on the priority list are large and complex and will require significant work to prepare well enough to ensure bankability. ***Mitigation:*** It is well understood by the SAPP that they will need to attract further funding from other sources as part of this engagement. A number of existing development partners have been approached and the SAPP is optimistic that further funding will become available for activities under component B.

VI. APPRAISAL SUMMARY

A. Economic analysis

58. Primary beneficiaries of the development of regional energy projects and therefore of the proposed Project will be the citizens of the Southern Africa Power Pool Region. Expanded, cheaper and more reliable electricity supply is central to economic and social growth in the region. The development of large generation sources and associated transmission infrastructure will ensure cost-effective electricity supply for countries in the Southern Africa region that are or close to becoming energy constrained. In particular, countries that are likely to import electricity will benefit from the increased electricity consumption from reliable sources. Countries where large generation projects are likely to be developed will also gain from the revenues of electricity exports.

59. The proposed Project has an intrinsic rationale for public provision, because of its nature – technical assistance – and its regional scope. One of the Project's main tasks – building capacity and maintaining institutional legitimacy amongst regional institutions, governments, utilities and regulators – is largely in the domain of public funding sources. Also, the preparation of large and complex cross-border projects entails high upfront costs that will be difficult to cover with commercial financing alone, given the risks involved. Regional and project-specific analysis carried out under the Project will also strengthen institutional, planning and project management capacity at both regional and country level.

60. The Bank can bring significant added value in light of its experience in supporting preparation and implementation of regional energy projects in Africa and other developing regions. This particular Project is intended to lead to a step-change in preparation activity for regional projects, and the Bank is uniquely positioned to provide high-level technical guidance as well as play a convening role among client countries and development partners.

61. The economic evaluation of a technical assistance project is a conceptual exercise and is even more so in the case of this particular Project, which will support preparation of a number of transformational regional projects that remain to be identified. Nonetheless, a range of direct and indirect economic benefits can be defined. Direct economic benefits relate to the lower costs of preparation of regional energy projects resulting from coordination at regional level as well as increased speed and quality of preparation. High quality preparation reduces/mitigates risks and therefore should increase the incidence of implementation of economically beneficial projects. Indirect economic benefits relate to the large efficiency gains associated to the optimization of generation and transmission investments on a regional basis rather than at the level of individual countries. The SAPP Pool Plan has estimated that coordination of generation and transmission

investments would save the SAPP region between US$4.8 and US$8.7 billion in net present value during 2006-2025. Savings result from the ability to source power from low cost sources in the region rather than developing relatively more expensive power domestically. The estimated gains from increased interconnectivity are found to be robust to a range of assumptions about hydro conditions, demand, forced outage rates, and other parameters.

B. Technical

62. The project does not directly fund infrastructure or technical equipment – but will fund a number of studies that will include technical feasibility and design studies for preparation of generation and transmission infrastructure.

C. Financial Management

63. The SAPP Coordination Center, through the Projects Acceleration Team, will be responsible for the financial management of the proposed Project. The SAPP Coordination Center will also be solely responsible for the financial management related to management and administration of the PPA funds. A financial management assessment of the SAPP Coordination Center was undertaken in line with the OP/BP 10.00. The objective of the assessment was to determine whether the financial management arrangements put in place by the implementing entity are adequate to: (a) ensure that the project funds are used exclusively for the intended purposes in an effective and efficient manner; (b) enable the correct and complete recording of all transactions and balances relating to the Project; (c) facilitate the preparation of regular, accurate, reliable and timely financial statements; (d) safeguard the Project's assets; and (f) ensure that auditing arrangements acceptable to the Bank are in place.

64. The assessment concluded that the SAPP Coordination Center has satisfactory accounting arrangements and the existing Finance Manual provides adequate guidance for financial management under the Project. Being a recipient of donor support from various multilateral and bilateral institutions (AfDB, EU, USAID, NORAD, SIDA, etc.), the Coordination Center has considerable experience in managing funds. Once established, the Projects Acceleration Team will carry out all functions related to project implementation including financial management. The Team will include among its staff a competitively recruited, experienced Financial Management Specialist. A set of mitigation measures and an action plan (as documented in annex 3) have been identified to reduce the financial management risk of the Project and ensure that the FM systems put in place are able to provide accurate and timely information on project status as required by the Bank.

65. The financial management arrangements in place together with the proposed strengthening of the financial management system and reporting meet the Bank's minimum requirements for the administration of project funds under the OP/BP 10.00. As a result, the overall FM risk rating, taking into account the mitigation measures, was assessed to be ***moderate***. Nonetheless, the Bank will carry out a new FM assessment once the PAT is on board and a Financial Management Specialist has been recruited.

D. Procurement

66. The SAPP Coordination Center will carry out procurement related to the hiring of the key staff of the Projects Acceleration Team, including a qualified Procurement Specialist, and to all other activities to be financed under the PPA. Once established, the PAT will carry out the procurement related to all activities envisaged under the proposed Project.

67. A Procurement Risk Assessment of the SAPP Coordination Center located in Harare, Zimbabwe was undertaken on April 5, 2014 in accordance with the World Bank's Procurement Risk Management System (P-RAMS). The Implementation Agency Procurement Risk of the SAPP Coordination Center was assessed to be ***substantial***. The hiring of a qualified Procurement Specialist as part of the PAT is expected to mitigate the risks related to the weak procurement capacity of the SAPP Coordination Center. Additional risk mitigation measures include the update of the Procurement Procedures Manual currently used by the SAPP Coordination Center; training of relevant staff of the SAPP Coordination Center in procurement procedures, especially those related to evaluation of Expressions of Interest and preparation of Requests for Proposals; and the enhancement of internal controls by separating selection from approvals and payment responsibilities. These provisions, together with the additional mitigation measures detailed in annex 3, once implemented, would reduce the procurement risk of the Project to ***moderate.***

E. Environment and Social (including Safeguards)

68. Despite this being a technical assistance (TA) Project, it is proposed that it is classified as safeguards category "A" (full assessment). While it will not finance any physical structures or activities that could have direct environment or social footprints on the ground, it will include detailed studies for potential new generation and transmission projects that would have significant potential environmental or social impacts, if and when these investments materialize.

69. Part of the project objective and activities will be to introduce and/or strengthen environmental and social assessment and management systems within the SAPP and the participating countries, which comply with good practice and would result in an appropriate range of safeguards instruments. The first of such instruments to be produced during project implementation will be an overall Environmental and Social Management Framework (ESMF), providing strategic guidance to the SAPP on the development and application of environmental and social criteria in project screening, prioritization, and development. The ESMF will also provide for a detailed safeguards screening to be carried out during implementation of the specific investments selected. Such screening will identify which of the Bank's safeguards policies should be triggered for future project development, and establish a road map for the production of the required instruments for environmental and social assessment and management.

70. Given the specific situation of a Category "A" TA project, the appropriate safeguards instrument to be produced during the *preparation phase* was determined to be the Terms of Reference (ToR) for the ESMF, which was reviewed by the Bank and disclosed to the public for consultations. Further instruments anticipated to be prepared during the *implementation phase* of the Project once specific investments are identified and the techno-economic planning and design

process initiated will be ESIAs, RPFs and other potentially required studies (e.g. strategic, regional or cumulative impact assessments).

Annex 1: Results Framework and Monitoring

Country: Africa

Project Name: SAPP-Program for Accelerating Transformational Energy Projects (P126661)

Results Framework

Project Development Objectives

PDO Statement

The Project Development Objective is to advance[11] the preparation of selected priority regional energy projects in the Southern African Power Pool participating countries.

These results are at	Project Level

Project Development Objective Indicators[12]

Indicator Name	Baseline	Cumulative Target Values						
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Priority regional energy projects whose preparation is advanced	0.00	0.00	0.00	1.00	2.00	3.00	3.00	3.00

[11] "Advance" has different connotations based on the status of preparation as well as the nature (i.e. publicly vs. privately financed) of the priority regional energy projects selected for support under the proposed operation. For instance, if the selected priority project is in the early stages of preparation, TA support is expected to help complete key outstanding feasibility studies (including technical, economic and financial feasibility studies; environmental and social assessments, etc.) and take preparation to the next level. If a project is in an advanced stage of preparation, TA support in the form of transaction advice may help conclude critical negotiations and agreements (i.e. related to a PPA). If a project involves commercial equity and/or debt, TA support may cover outstanding financial analyses, and/or consist of strategic advice for packaging the project and attracting financiers, eventually leading to financial closure.

[12] The indicator related to Direct Project Beneficiaries (and of which female) has not been included because of the difficulty to capture benefits to end-consumers from a TA project such as the proposed one. Direct projects beneficiaries are rather the stakeholders of priority regional energy projects selected for preparatory support under the Project, including Governments and government agencies, regional institutions, and potential investors and financiers (multilateral, bilateral and private sector).

(Number)								

Intermediate Results Indicators

Indicator Name	Baseline	Cumulative Target Values						
		YR1	YR2	YR3	YR4	YR5	YR6	End Target
Projects Acceleration Team staff recruited and operational (Number)	0.00	4.00	6.00	7.00	7.00	7.00	7.00	7.00
Preparatory studies/activities for priority regional energy projects completed (Number)	0.00	0.00	2.00	4.00	6.00	8.00	10.00	10.00
Regional analytical studies completed (Number)	0.00	0.00	0.00	1.00	2.00	2.00	2.00	2.00

Indicator Description

Project Development Objective Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Priority regional energy projects whose preparation is advanced	Regional energy projects that are endorsed as priorities by concerned countries and prepared in part of fully with support under the proposed Project	Annually	PAT reports	PAT

Intermediate Results Indicators

Indicator Name	Description (indicator definition etc.)	Frequency	Data Source / Methodology	Responsibility for Data Collection
Projects Acceleration Team staff recruited and operational	Staff will include PAT Coordinator, FM and procurement specialists, environmental and social specialists, financing specialist	Annually	PAT reports	PAT
Preparatory studies/activities for priority regional energy projects completed	Depending on the project, this may include feasibility studies, ESIAs, RAPs, legal documents, financial and other project specific studies; transaction advisory support; etc.	Annually	PAT reports, consultant reports	PAT, consultants
Regional analytical studies completed	No description provided.	Bi-annually	PAT reports, consultant reports	PAT, consultants

Annex 2: Detailed Project Description

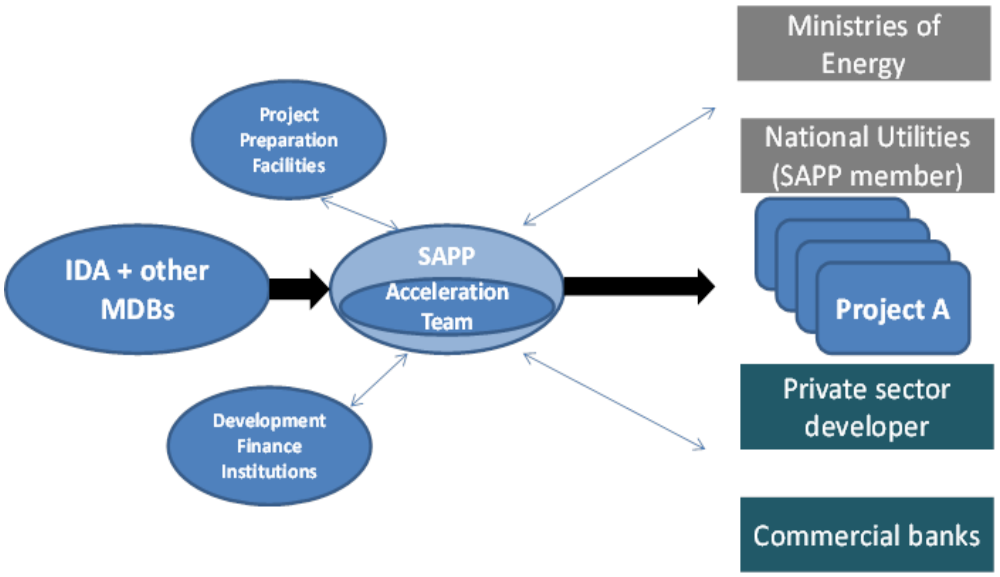
SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Project Components

1. The Project has the following three components:

2. **Component A: Setting up the Projects Acceleration Team (US$7 million)**. This component will finance the establishment of a Projects Acceleration Team (PAT), a high caliber core team in charge of moving forward the preparation of the regional projects identified as priorities to the SAPP. 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 is expected to be a mixture of senior and mid-career specialists with strong track records of project development using public and private funding. The PAT is also expected to be able to establish strong working relationships and interact effectively with the broad range of stakeholders and financiers concerned with any specific priority project, thereby becoming a focal point for project preparation in the region (figure 1).

Figure 1: PAT interactions with stakeholders of regional energy projects



3. The PAT will assess and adjust to the type of role it needs to play on a specific project, which may range from leading selected or all preparation activities to providing support to the concerned agencies and ensuring that preparation effectively serves the needs of project stakeholders. It will be important to maintain flexibility on what preparation work is carried out – as different project structures are amenable to different allocation of preparation costs and activities between the public and private sectors. 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.

4. The regional location of the office for the PAT will need to be carefully chosen to attract the very best talent to work on these complex projects. Experts with appropriate experience of large, regional, cross-border and complex projects are limited and highly sought after and will be in a position to exercise preferences as to where they wish to live. It will also be important that the location that is chosen enable easy access to regional developers and commercial banks and that the city has good transport access to the rest of the region. The costs related to renting the office and other operating expenses will be covered under this component.

5. A Project Preparation Advance in the amount of US$1 million is being used to hire key staff for the Projects Acceleration Team (a Project Coordinator, a Financial Management Specialist and a Procurement Specialist), provide training on Bank fiduciary issues, set-up the PAT office (including office equipment and operating expenses for the first six months of project implementation) and procure the consultants for the preparation of the Environmental and Social Management Framework.

6. **Component B: Project Preparation Funds (US$10 million).** The funds in this component will be managed by the PAT and 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 use of funds as long as they are clearly used to improve the quality of project packages and enable sponsors and credit committees of banks 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.

7. **Component C: Regional analytical support (US$3 million).** This component will support critical analytical work that the SAPP judges important for advancing preparation of priority projects. This includes building a solid knowledge base to investment decisions and helping ensure long-term sustainability of investments.

8. A key task will be the update and revision of the SAPP Pool Plan. The Plan was originally commissioned by the SAPP Planning Sub-committee in 2001. In 2009, the Coordination Center commissioned a revision of the Plan (SAPP Pool Plan 2009) with support by the World Bank with two main objectives: (a) develop an integrated generation and transmission expansion plan for the SAPP; and (b) determine the benefits that could accrue to members from the coordination of their individual expansion plans. The Plan covers the power systems of all SAPP members and, assuming their full integration, has used power market simulation models that optimize future investments in generation and transmission capacity at a regional rather than national level. On this basis, the Plan has identified a detailed list of priority generation and transmission projects that allow accommodating fast increasing electricity

demand in the region at the least cost over the period from 2006 to 2025.

9. A lot has changed since the Plan was released. Shifts in national priorities for development of generation capacity, revised demand growth expectations, as well as progress made on some of the identified projects in the past five years make the Plan obsolete. More importantly, the methodology used for preparing the Plan does not allow controlling for the structural risks of regional integration. Critical risks may include a country deciding not to implement a generation project or to reduce reliance on exports. Delays in project implementation also severely affect the benefits of integration. The SAPP Pool Plan will be revised using a 'risk scenarios approach', which will allow better capturing the diverse structural risks related to regional integration. A further 'robustness' analysis will combine all scenarios together, identify options to adjust investment decisions to such risks, as well as isolate projects that remain robust under all circumstances.

10. 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, including an assessment of power trade expectations and potential; (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 (such as analyses of climate change impacts, hydrological variations and cumulative impacts to the region; spatial issues studies; etc.) to improve the understanding and mitigation of the key risks associated to the implementation of large-size and complex energy projects. The exact number and scope of these studies remain to be defined. The SAPP will be expected to take a proactive role, together with other stakeholders in the region, in determining the need for and subsequently advancing of important studies. Outputs of such studies could be provided to the SADC Secretariat as part of the information flow to SADC Ministers. A key study will concern the link between water use and energy development in the region. A sustainable scale-up of regional generation capacity and notably hydropower capacity calls for a more solid understanding of the water use associated to power generation and its impact on water resources. The analysis will assess the water requirements specific to the various generation technologies, the related impacts on water resources – including downstream impacts on rivers and cumulative impacts – and the practices and policies to be enforced both nationally and regionally to ensure sustainable water use.

11. The PPA is being used to advance the update of the SAPP Pool Plan and some of the associated studies identified by the SAPP. Funding under the Project 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.

Annex 3: Implementation Arrangements

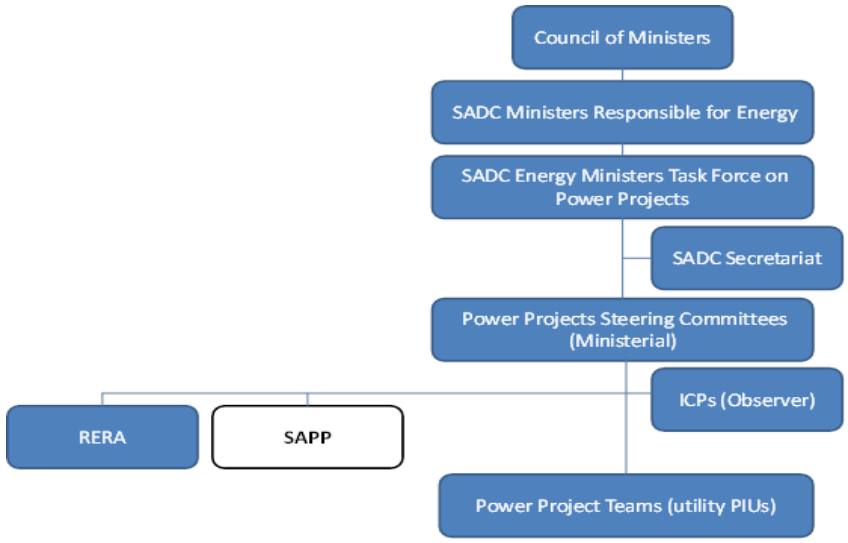
SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

A. Project Institutional and Implementation Arrangements

1. The Southern African Power Pool will implement this Project through the Coordination Center. The Bank has conducted legal due diligence of this agency and found that the SAPP Coordination Center meets the Bank's legal requirements for being a recipient of regional IDA funding.

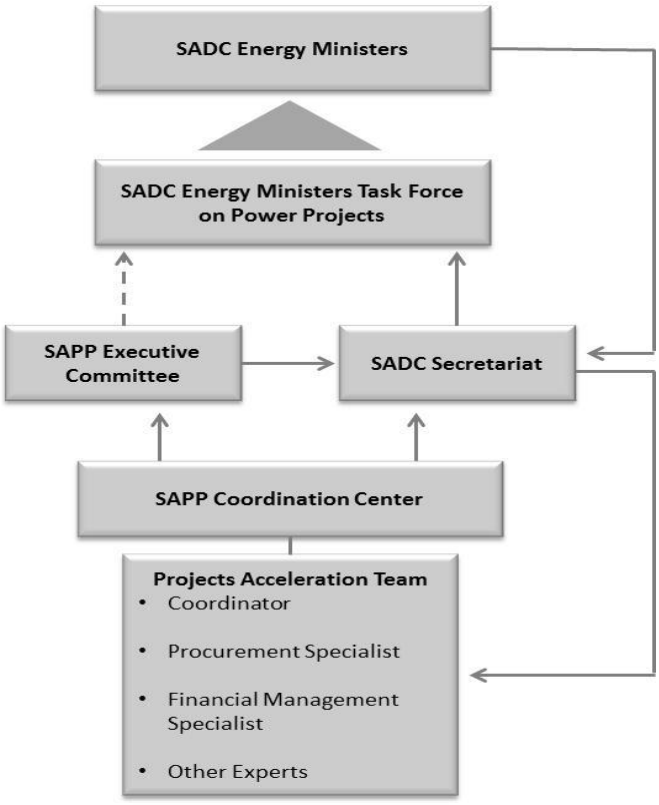
2. The implementation arrangements for this Project will, to the extent feasible, fit into the governance structure that was set out in the 2008 SADC Communique to advance regional energy projects.

Figure 1: Existing authorizing structure for regional energy projects



3. The Project's implementation process consists of the following key steps: (a) identification of regional energy projects to be considered for preparatory support; (b) screening and selection of these projects; (c) authorization process; (d) IDA's no-objection; (e) agreement on terms on which the funds will be provided; and (f) implementation of preparatory activities. Project's implementation arrangements are summarized in figure 2.

Figure 2: Project implementation arrangements



4. **Identification and selection of projects.** The identification of a project can be initiated by the PAT, concerned countries' governments and/or utilities, or project sponsors. For any project not directly identified by the PAT, interested stakeholders make a request to the SAPP Coordination Center or directly to the PAT, which is formalized by filling out a form. In all circumstances, the PAT assesses the level of priority of the project and its eligibility for receiving preparation support. The project may have been already identified as a priority by the SADC and included in the list presented in annex 9, in which case the assessment is somewhat straightforward. If not, the PAT verifies that the project does qualify as priority based on the selection criteria also detailed in annex 9. The PAT also checks that the project and preparation tasks fit within the eligibility criteria for financing of IDA and of any other donors that may join the platform and offer preparatory support. This is an important step – especially as the donors will eventually be approached for no-objection, and it will be important for the SAPP to identify a project that may not have donor support prior to the process of receiving regional political authorization.

5. **Authorization process.** Upon completion of this screening process, the Coordination Center informs the SAPP Executive Committee and the SADC Secretariat, which help bring the project to the attention of the SADC Energy Ministers. At this stage an important role may be played by the SADC Energy Ministers' Task Force, currently composed of the energy ministers of South Africa, Mozambique, the Democratic Republic of Congo, Botswana and Zimbabwe. Where the SADC Secretariat deems the need for greater political buy-in, the Task Force takes the lead in ensuring full political authorization to move ahead with the project with support from

the PAT. The Task Force calls in and leverages other Ministers of Energy as deemed appropriate. An already established requirement for regional energy projects in the SADC region is that a Memorandum of Understanding is required between all relevant governments (all countries where the project will be physically located). This requirement will be enforced. If the project is located in only one country, the interested country needs to send a consent letter to the SAPP.

6. **IDA's no objection**. Once the decision to move ahead is taken, the SAPP Coordination Center seeks a no-objection from the relevant donors (initially IDA). This no objection is required for the PAT to commence activities, and may be reasonably withheld if the relevant donor has concerns (including, but not limited to governance issues) about the project. Regional energy projects proposed for support shall be carried out only in the territory of countries eligible to receive financing out of the resources of IDA or IBRD, provided that at least one of the participating countries is eligible to receive financing out of IDA resources. Strict criteria for use of IDA are not presented at this stage – as all projects and circumstances are different and it is valuable to preserve flexibility for the Bank to exercise discretion. However, it is clear that the Bank would not fund activities that IDA is not allowed to fund (e.g. nuclear power, IBRD only country projects, etc.) and would strictly follow the World Bank strategy (for instance, regarding coal projects) and World Bank due diligence regarding potential safeguards and integrity issues.

7. **Agreement of terms on which funds will be provided.** The next important step is the negotiation and agreement of terms on which the services of the PAT will be provided. Whilst the PAT is proposed to be funded from IDA grants, and other donors are expected to join the funding of project preparation, in most cases the SAPP Coordination Center will seek repayment either in cash or in-kind. Cash repayment could be structured by keeping a full record of preparation costs incurred by the PAT for a particular project and seeking to cover these costs as part of the overall cost of the project (i.e. including construction and implementation costs). When there is a payout to cover the project costs (for instance as part of a private sector/commercial financial closure process), there would also be a payment to SAPP for the costs incurred by the PAT. Repayment in cash would be the preferred option. In some cases, however, it may be that only in-kind repayments are possible. Such repayments will still be preferred to no repayment. The options for the in-kind form of the payment may depend on factors such as the type of asset being prepared and whether it is a public or private sector led project. For transmission infrastructure, the repayment could, for instance, consist of an allocation of rights to transmission capacity. In the case of generation, there may similarly be an option for power (or payment from future sales of power) to be allocated. In all cases, funds received are expected to be re-used by the PAT to support further project preparation activities. Upon reaching an agreement on repayment, the SAPP Coordination Center sends a letter to the project implementers, which includes the understanding of preparatory support, outputs and timeline.

8. **Implementation of preparatory support.** The preparatory support so agreed and authorized is implemented by the SAPP Coordination Center through the PAT. Once a new project is selected and approved for preparatory support, the PAT is assigned a budget approved by the Manager of the SAPP Coordination Center and subsequently engages on tasks and hires consultants as appropriate.

9. The staff of the PAT will be built up over time. Initial hiring will focus on core staff needed to implement donor funds and to advance initial discussions regarding the preparation of projects. It is envisaged this will consist of three staff – a Coordinator, who is an experienced subject matter expert that can build up initial confidence in the work of the PAT – and a Financial Management Specialist and Procurement Specialist. Together, this team shall be able to carry out initial activities of identifying and/or screening potential priority projects; develop relationships in the region and discuss support requirements; carry out hiring of consultants and further PAT staff; and fulfill all monitoring and reporting duties. Additional staff will be hired based on the needs of the projects selected for support. All staff of the PAT will report to the Coordinator who, in turn, will report to the SAPP Coordination Center Manager. The PAT will generate all reporting required to keep the SAPP, the SADC Secretariat, SADC Ministers and relevant donors informed.

10. Experts working for the PAT are expected to be capable of holding discussions with senior officials of governments, utilities, banks and developers in a highly credible manner, to assess the situation of the specific project and design well-tailored solutions. They should then identify the type of expertise needed, prepare terms of reference and contract consulting services in coordination with the Procurement Specialist, and subsequently oversee the work and outputs of consultants so they best meet the needs of the situation.

11. The regional location of the office for the PAT will need to be carefully chosen to attract the very best talent. Experts with appropriate experience of large, regional, cross-border and complex projects are limited and highly sought after and will be in a position to exercise preferences as to where they wish to live. It will also be important that the location that is chosen enable easy access to regional developers and commercial banks and that the city has good transport access to the rest of the region.

12. Over time, it is expected that further donors will provide preparation funding for use by the PAT. Whilst eligibility criteria for accessing and using the funds may vary, it is expected that support by all donors will fit into the PAT mode of operation.

B. Financial Management, Disbursements and Procurement

Financial Management

Introduction

13. The SAPP Coordination Center, through the Projects Acceleration Team, will be responsible for the financial management of the proposed Project. The SAPP Coordination Center will also be solely responsible for the financial management related to management and administration of the PPA funds. The Bank's financial management team conducted a financial management assessment of the SAPP Coordination Center in line with the OP/BP 10.00. The objective of the financial management assessment was to determine whether the financial management arrangements put in place by the implementing entity are adequate to: (a) ensure that the project funds are used exclusively for the intended purposes in an effective and efficient

manner; (b) enable the correct and complete recording of all transactions and balances relating to the Project; (c) facilitate the preparation of regular, accurate, reliable and timely financial statements; (d) safeguard the Project's assets; and (e) ensure that auditing arrangements acceptable to the Bank are in place.

14. Being a recipient of donor support from various multilateral and bilateral institutions (AfDB, EU, USAID, NORAD, SIDA, etc.), the SAPP Coordination Center has considerable experience in managing funds. Once established, the Projects Acceleration Team will carry out all functions related to project implementation including financial management. The Team will include among its staff a competitively recruited, experienced Financial Management Specialist.

Financial management risk assessment and mitigation

15. Financial management risks are of two types: (i) risks associated to the Project as a whole and the context in which the Project is implemented (inherent risks); and (ii) risks associated to a weak control system with regard to project implementation (control risks). These risks and the associated mitigation measures as incorporated into the Project's design are described in table 1.

Table 1: Financial management risks and mitigation measures

Risk	Risk Rating	Risk Mitigation measures incorporated into Grant design	Risk after Mitigation
Inherent Risk			
Entity Level The SAPP Coordination Center may lack adequate financial management capacity and not be entirely familiar with the requirements for administration of IDA funds.	**Substantial**	Financial management functions for the Project will be carried out by the SAPP Coordination Center through the Projects Acceleration Team, which will include a Financial Management Specialist with the requisite qualifications and experience in project financial management. FM training will be provided to both SAPP Coordination Center and PAT's FM staff as needed. A Financial Management Action Plan (FMAP) to mitigate the risk at the entity level will be implemented as detailed in table 3.	**Moderate**
Project Level The resources of the Project may not be used for the intended purposes.	**Substantial**	The SAPP Coordination Center has a Financial Management Manual that will guide the implementation of the Project. Regular supervision and monitoring will be carried out by the Bank's team.	**Moderate**
Overall Inherent Risk	**Moderate**		**Low**
Control Risk			

Accounting policies and procedures The accounting system might not allow proper recording of transactions in accordance with international accounting standards.	**Moderate**	The SAPP Coordination Center currently uses Pastel Evolution for accounting and follows the general guidelines for donor financial support, based on a Board resolution adopted in 2012. Once the PAT will be in place, all journal entries will be approved by the SAPP Coordination Center Manager before they are posted by the PAT Financial Management Specialist.	**Low**
Segregation of duties Currently, there is no segregation of duties in the financial management system used by the SAPP Coordination Center, which may pose risks to the adequate execution of and control over FM functions.	**Substantial**	The SAPP Coordination Center, in consultation with the Bank's team, will ensure sufficient separation of FM duties for the Project, including ordering, receiving, accounting for, and paying for goods.	**Moderate**
Budgeting Weak budgetary execution and control may lead to budgetary overruns or inappropriate use of Project's funds.	**Moderate**	The FM Specialist of the PAT will produce and submit to the SAPP Coordination Center budget execution reports on a monthly basis comparing the actual expenditure to budgets.	**Low**
Accounting The financial accounting and reporting may not be done accurately and in accordance with international standards. The Accounting Staff of the SAPP Coordination Center may not be fully familiar with the FM and disbursement procedures for IDA funds.	**Moderate**	The accounting system currently in place at the SAPP Coordination Center is working well. The FM Manual provides good guidance on accounting. The SAPP Coordination Center and PAT FM staff will receive training on Bank's FM, procurement and disbursement procedures as needed.	**Low**
Internal Audit The SAPP Coordination Center has no internal audit, which poses the risk of violations of internal controls going un-noticed.	**Substantial**	The SAPP Coordination Center will put in place internal auditing arrangements acceptable to the Bank. The option of outsourcing internal auditing services may be considered.	**Moderate**
Financial Reporting The SAPP Coordination Center may not be able to produce the required financial reports in a timely manner as mandated by the Bank for project monitoring and management.	**Moderate**	The preparation of financial reports will be part of the tasks of the PAT's FM Specialist, who will be required to have appropriate capacity in this field.	**Low**
External Audit Low audit standards may lead to failures in detecting errors and misstatements in the financial statements.	**Substantial**	The SAPP Coordination Center will recruit an external auditor within 4 months after the Project's effectiveness date, based on Terms of Reference acceptable to the Bank.	**Moderate**
Overall Control Risk	**Substantial**		**Moderate**
Overall Project Risk Rating	**Substantial**		**Moderate**

Financial Management Arrangements

16. **Budgeting arrangements.** The Projects Acceleration Team will prepare an annual budget for the Project and will be responsible for producing variance analysis reports comparing planned to actual expenditures on monthly and quarterly bases. The SAPP Coordination Center

will be responsible for budget approval and monitoring of budget execution. The periodic variance analysis will enable the timely identification of deviations from the budget. These reports will be part of the interim unaudited financial reports (IFRs) that will be submitted to the Bank.

17. **Accounting arrangements.** The SAPP Coordination Center currently uses Pastel Evolution as platform for financial management and reporting. The software allows for proper recording of financial transactions, including the allocation of expenditures in accordance with the respective components, disbursement categories and sources of funds. The same platform will be used by the PAT for preparation and consolidation of the quarterly interim financial reports and the annual financial statements.

18. **Internal control.** An internal control system will be put in place so as to ensure the adequate preparation of accounting records, the approval of transactions and the orderly management of financial resources and assets. The SAPP Coordination Center will prepare a Project Implementation Manual, which will clarify the procedures related to internal controls. The Projects Acceleration Team will periodically review the manual over the project life to ensure its continued adequacy and ensure compliance with the requirements set out therein.

19. **Governance and Anti-Corruption.** The Bank's Anti-Corruption Guidelines *("Guidelines on Preventing and Combating Fraud and Corruption in Projects Financed by IBRD Loans and IDA Credits and Grants",* dated October 15, 2006 and revised in January, 2011) apply to this Project. Sections of these guidelines, especially those relating conflict of interest, procurement and contract administration monitoring procedures, procedures undertaken for replenishing the Designated Account and use of the Project's asset shall be provided as an annex to the Project Implementation Manual.

Fund flow arrangements

20. **Bank accounts.** The SAPP Coordination Center will open a designated account (DA) denominated in US Dollars with a commercial bank (it has been indicated that it will be in Botswana) acceptable to the World Bank, and maintain it throughout the life of the Project. There will need to be at least two signatories to the DA. Once opened, the details of the DA and signatories should be communicated to the Bank. Based on the approved work plan and withdrawal requests, the World Bank will disburse into the DA on a quarterly basis and the Project will spend from this account.

Disbursement Arrangements

21. The World Bank allows four disbursement methods, namely: (i) advance methods including transaction-based and report-based disbursement; (ii) reimbursement method, which consists of refunding of amounts pre-financed by the implementing entity; (iii) direct payments to a third party providing services to the Project; and (iv) special commitments, which may require letters of credit from financial institutions. The transaction-based disbursement is against full documentation of expenses (SoE). The report-based disbursement can be based on IFRs. If this method is adopted, the first allocation will cover the financing needs for two quarters, and

subsequent allocations the needs of each following quarter. The Disbursement Letter will establish the first disbursement method to be used under the Project, which may be later revised.

22. The Project will have one disbursement category as detailed in table 2 and will disburse 100 percent of eligible expenditures (inclusive of taxes).

Table 2: Disbursement categories

Category	Amount of the Financing Allocated (in US$)	Amount of the Financing Allocated (expressed in SDR)	Percentage of Expenditures to be Financed (inclusive of Taxes)
(1) Goods, consulting and non-consulting services, operating costs and training	19,000,000	12,500,000	100%
(2) Refund of Preparation Advance	1,000,000	700,000	
TOTAL AMOUNT	20,000,000	13,200,000	

Financial Reporting Arrangements

23. The Projects Acceleration Team will prepare quarterly un-audited Interim Financial Reports (IFRs) for the Project in form and content satisfactory to the Bank, which will be submitted by the SAPP Coordination Center to the Bank within 45 days after the end of the quarter to which they relate. The Coordination Center will prepare and agree with the Bank on the format of the IFRs. At the end of each financial year, annual financial statements will be prepared using International Public Sector Accounting Standards and submitted to auditors.

24. **Internal audit.** The SAPP Coordination Center will strengthen its internal audit capacity. In doing so, it may decide to set an internal audit department or outsource the auditing function and employ an Internal Auditor (consulting firm) with appropriate qualifications, experience and independency and based on Terms of Reference agreed with the Bank. The Internal Auditor (consulting firm) will audit the Project's activities and prepare quarterly internal audit reports.

25. **External Audit Arrangements.** The Project's accounts will be audited annually and the audit report (including the Management letter) submitted to the World Bank no later than 6 months after the end of each year. The audit shall be carried out by an independent auditor engaged using a procurement method acceptable to the World Bank. The audit shall be done in accordance with International Standards on Auditing. The Terms of Reference for the external auditor will be prepared by the SAPP Coordination Center and submitted to the Bank for no-objection. The Project will comply with the Bank disclosure policy on audit reports (e.g., make them publicly available promptly after receipt of all final financial audit reports, including qualified audit reports) and place the information provided on the official website within one month of the report being accepted as final by the Bank.

Financial Management Action Plan

26. A financial management action plan has been developed based on the assessment of FM

risks and weaknesses as detailed in table 3.

Table 3: Financial management action plan

Action	Indicative Date	By whom
Recruit a Financial Management Specialist as part of the PAT with requisite experience and qualifications	Before effectiveness	SAPP Coordination Center
Train FM staff on World Bank FM procedures	As soon as recruited	SAPP Coordination Center and Bank
Set an internal audit department or outsource internal auditing services with ToR agreed by the Bank	4 months after effectiveness	SAPP Coordination Center
Contract an independent external auditor based on ToRs acceptable to the Bank	4 months after effectiveness	SAPP Coordination Center

Conclusion of the assessment

27. The conclusion of the assessment is that the SAPP Coordination Center has satisfactory accounting arrangements and the existing Finance Manual provides adequate guidance for financial management under the Project. The financial management arrangements in place together with the proposed strengthening of the financial management system and reporting meet the Bank's minimum requirements in ensuring accountability and transparency in the administration of project funds under OP/BP 10.00. The overall FM risk rating, taking into account the mitigation measures, is assessed to be ***moderate***. Nonetheless, the Bank will carry out a new assessment once the PAT is on board and a Financial Management Specialist has been recruited to confirm that PAT's FM capacity and the FM systems in place meet the Bank's FM requirements for administration of IDA funds.

Procurement

28. The SAPP Coordination Center will carry out the procurement related to the hiring of the key staff of the Projects Acceleration Team, including a qualified Procurement Specialist, and to all other activities to be financed under the PPA. Once established, the PAT will carry out the procurement related to all activities envisaged under the proposed Project.

29. A Procurement Risk Assessment of the SAPP Coordination Center located in Harare, Zimbabwe was undertaken on April 5, 2014 in accordance with the World Bank's Procurement Risk Management System (P-RAMS). The Implementation Agency Procurement Risk of the SAPP Coordination Center in the absence of mitigation measures was assessed to be ***substantial***. The entrustment of procurement functions to the PAT and the hiring of a qualified Procurement Specialist within the PAT are expected to mitigate the risks related to the weak procurement capacity of the SAPP Coordination Center. These provisions, together with the additional mitigation measures detailed below, if implemented in a manner satisfactory to the Bank, would reduce the procurement risk of the Project to ***moderate***.

30. **Procurement manual.** The SAPP Procurement Procedures Manual currently used by the

Coordination Center should be updated and strengthened to be used under the proposed Project. The updated Manual, together with the Procurement Plans prepared by the implementing agency, will define the key procurement arrangements for the Project, including packaging of procurement, maintaining clarity of accountability over procurement, record keeping, and frequency and scope of prior and post review. The Procurement Procedures Manual will address any areas that have been identified as needing improvement based on the Procurement Risk Assessment. It will cover the legal and regulatory framework, roles and responsibilities of the institutions and staff involved in procurement – be they regular staff of the SAPP or consultant staff, internal and external controls and quality assurance checks or systems, approval systems and accountability, and contracts register. It will also spell out the roles and responsibilities of various players involved in contract management and the Bank's fiduciary role in all prior review of IDA-funded contracts.

31. **Procurement risk mitigation measures**. Based on the P-RAMS, the main risks and proposed risk mitigation measures are shown in table 4 below.

Table 4: Summary assessment of procurement capacity, risk, and mitigation

Issues	Risks	Mitigation measures	By when
Accountability for procurement decisions in SAPP	The accountability and institutional arrangements for procurement are inadequately documented in the current Procurement Procedures Manual. Distinction is also required for the procurement processes for works, goods and non-consultant services from consultant services.	SAPP Coordination Center to revise the Procurement Procedures Manual clearly describing responsibilities of all staff involved in procurement and the role and responsibilities of the PAT once established in in relation to procurement. SAPP Coordination Center to enhance internal controls in procurement by separating selection from approvals and payment responsibilities.	Effectiveness
Record keeping and document management systems	Records need to be protected from loss and unauthorized access. Adequate storage space needs to be provided.	The SAPP Coordination Center to develop good filing and data management system to be used by the PAT for the life of the Project. The SAPP Coordination Center and the PAT (once established) to secure an adequate storage for files. Training and supervision to be provided by the Bank's procurement team.	Immediate, and to be reviewed throughout the life of the Project
Bid Document preparation and evaluations	The review of some bidding documents has shown: - Areas for improvement in RFP preparation; and	Contract management skills of the SAPP Coordination Center and the PAT to be enhanced. Staff will be	Immediate

	- EOI evaluations.	required to attend appropriate training.	
Staffing and contract management	The SAPP Coordination Center does not have designated staff assigned with procurement role.	Procurement functions to be entrusted to the PAT. An experienced and qualified Procurement Specialist for the PAT shall be recruited.	Prior to effectiveness

32. **Procurement Post Reviews (PPRs) and Independent Post Reviews (IPRs) by the World Bank**. In accordance with the assessed ***substantial*** procurement risk of the Project, the World Bank will carry out PPRs or IPRs for all contracts that will not be subject to prior review (as indicated by the Procurement Plan), using a sample of 15 percent. The Bank will continue to monitor procurement risks, and in particular, reassess them once the PAT is established and other mitigation measures have been completed. The sample size for PPRs and IPRs will be reduced as mitigation measures are successfully implemented. A *moderate* risk would be associated with a sample size of 10 percent; a *low* risk with a sample size of 5 percent. Changes in the risk profile will be communicated to the SAPP as part of the outcomes of the PPR or IPR exercise, which will also result in revisions of the prior review and National Competitive Bidding thresholds. The review thresholds are shown in table 5 below.

Table 5: Prior review and procurement method thresholds

Expenditure category	Contract value threshold (US$)	Procurement method	Contracts subject to prior review
1. Goods and Services (other than Consultants' Services)	≥ 1,000,000	ICB	All
	<100,000(rest excluding M/vehicles)	Shopping	None
	<200,000 (motor vehicles only)	Shopping	None
	All values	Direct Contracting	All[13]
	All values	UN Agency (UNOPS)	None
2. Consulting Firms	≥ 200,000	QCBS, QBS	All
	<200,000	CQS, LCS, QBS,	As in procurement plan
		Single Source	As in procurement plan[14]
3. Individual Consultants	≥ 100,000	IC- competitive selection	All
	<100,000	IC –competitive selection	None
		Single Source	All

NOTE 1: Contracts with a cost estimate below US$200,000 for motor vehicles only may be procured on basis of Shopping procurement method.

NOTE 2: Note: Short list comprising entirely of national consultants: Short list of consultants for services, estimated to cost less than US$200,000 equivalent per contract, may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. Engineering and contract management contracts with cost estimates of less than US$300,000 may comprise entirely of national consultants in accordance with the provisions of paragraph 2.7 of the Consultant Guidelines. The procurement plan will indicate those contracts using CQS whose short lists by exception may not comprise entirely national firms.

NOTE 3: No works contracts are envisaged under the project.

Procurement plan

33. The SAPP Coordination Center, with the support of the World Bank, has developed a Procurement Plan covering a period of 18 months, including the period of implementation of the PPA and beyond. The Plan details all the procurement packages that could be identified for this period and the related selection methods and Bank's review obligations. It will be updated as and when specific regional energy projects are selected for support and the needed procurement processes are better understood. The Plan will be updated at least once a year throughout the life of the Project.

Procurement arrangements

34. Procurement under the Project is expected to relate to goods and consulting services. No civil works contracts are envisaged under the Project.

Goods

35. Particular methods of procurement of goods are as follows:

[13] Contracts of up to US$ 1,000 for Goods and Services may be procured by Direct Contracting without the Bank's Prior Review.

[14] Contracts of up to US$ 5,000 may be procured by Single Source Selection without the Bank's Prior Review and subject to their inclusion in the Procurement Plan.

(a) **International Competitive Bidding.** Except as otherwise provided in the next paragraph, goods shall be procured under contracts awarded on the basis of International Competitive Bidding (ICB).
(b) **Other methods of procurement of goods and non-consulting services.** The following list specifies the methods of procurement, other than International Competitive Bidding, which may be used for goods. The Procurement Plan shall specify the circumstances under which such methods may be used.
    (i) Shopping; and
    (ii) Direct Contracting.

Schedule for goods and non-consulting services

36. Procurement of goods: Goods to be procured under the Project are likely to include: vehicles, IT equipment, office equipment, office furniture, and engineering and data analysis software among others. The procurement will be done using the World Bank's Standard Bidding Documents for all International Competitive Bidding contracts. Small value goods estimated to cost less than US$100,000 per contract may be procured under the Shopping procedure based on comparing price quotations obtained from several suppliers, with a minimum of three, to assure competitive prices, and is an appropriate method for procuring readily available off-the-shelf goods.

Consulting services

37. Particular methods of procurement for consulting services are:
(a) **Quality and Cost-Based Selection (QCBS)**. Except as otherwise provided in the paragraph below, consultants services shall be procured under contracts awarded on the basis of Quality and Cost-Based Selection.
(b) **Other methods of procurement of consultants' services**. The following list specifies selection methods, other than Quality and Cost-Based Selection, which may be used for consultants' services. The Procurement Plan specifies the circumstances under which such methods may be used:
    (i) Quality-based Selection (QBS)
    (ii) Selection based on the Consultant's qualifications (CQS)
    (iii) Least-cost selection (LCS)
    (iv) Single-source selection for firms (SSS),
    (v) Individual Consultants (IC).
    (vi) Single-source selection for IC (SSS),

Schedule for consulting services

38. Consulting services procured under the Project will include the selection of key staff in various disciplines needed for project implementation who collectively will constitute the PAT and all other consultants services such as for legal and financial support, transaction advice, environmental and social analysis, feasibility studies, and other studies needed for the specific preparation activities associated to the regional energy projects selected for preparatory support under the proposed Project. Consultants will be selected using World Bank Guidelines for Selection and Employment of Consultants, January 2011 version. The Bank will undertake prior review of selection of consultants above the threshold of US$200,000 for non-engineering works and US$300,000 for engineering works. Short lists of consultants estimated to cost less than

US$200,000 equivalent per contract may consist entirely of national consultants for non-engineering works and up to US$300,000 for engineering works. Individual Consultant's contracts above the threshold of US$100,000 and all Single Source Selection of all values will be subject to Bank's prior review.

Environmental and Social (including safeguards)

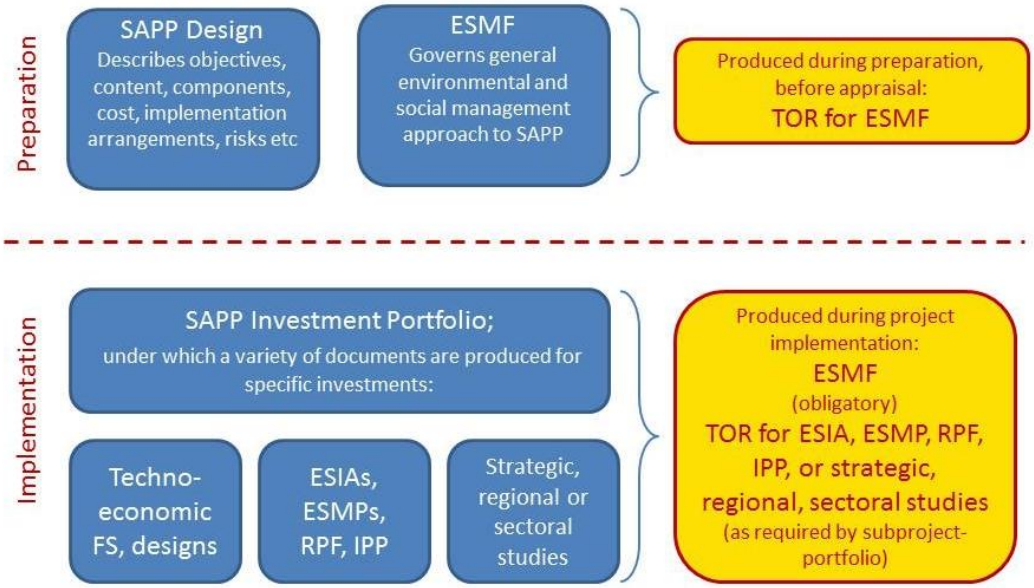
39. During implementation, one of the significant aspects of the project development objective and related project activities will be to introduce and/or strengthen environmental and social assessment and management systems within the SAPP and the participating countries. Such systems should comply with international good practice and would result in an appropriate range of safeguards instruments. The first of such instruments to be produced during project implementation will be an overall Environmental and Social Management Framework (ESMF), providing strategic guidance to the SAPP on the development and application of environmental and social criteria in project screening, prioritization, and development. The Terms of Reference (ToR) for the ESMF were produced and disclosed by the SAPP Coordination Center during the preparation phase.

40. The ESMF will yield the following information and results:

(a) Identification of all relevant potential environmental risks and social concerns that may arise as a result of the regional energy projects selected for support under the Project;
(b) Specification of appropriate roles and responsibilities of involved actors and parties;
(c) Development of a screening and assessment methodology for potential projects, that will allow an environmental/social risk classification and the identification of appropriate safeguards instruments;
(d) Development of environmental and social criteria for screening and prioritization within a portfolio of potential projects and activities;
(e) Outline of required procedures for managing and monitoring environmental risks and social concerns related to the selected projects, and develop the TOR for appropriate safeguards instruments (such as ESIAs, ESMPs, RPFs, RAPs, IPPs, and / or strategic, sectoral or regional studies) as appropriate and required;
(f) Identification of training, capacity building and technical assistance needed to successfully and effectively develop and implement the required safeguards instruments for investments planned during the TA project;
(g) Establishment of Project funding required to implement the ESMF requirements; and
(h) Provision of practical information resources (such as existing databases - incl. GIS, reports, studies, frameworks etc.) for implementing the ESMFs recommendations.

41. The preparation of the ESMF will enable the SAPP to identify the potential impacts of project activities and develop the necessary instruments, measures and processes to mitigate them. Figure 3 summarizes the types and sequence of safeguards instruments to be prepared during project preparation and implementation phases, as well as their connection to the Project's techno-economic design.

Figure 3: Required safeguards instruments



Monitoring & Evaluation

42. The SAPP Coordination Center will have the overall responsibility for monitoring and evaluating project components/activities in accordance with the indicators included in the Results Framework and Monitoring attached as annex 1. The Coordination Center will be able to call upon the PAT staff and will rely on data and inputs from the PAT in the preparation of quarterly progress reports and annual reviews. No later than 45 days after each quarter, the Coordination Center will submit quarterly progress reports to the Bank covering all project activities, including a procurement and financial summary report. Annual reviews, the first one to take place within twelve months after effectiveness, will provide detailed analysis of implementation progress toward achieving the project development objectives and include an evaluation of the financial management and a post-review of procurement aspects.

Annex 4: Operational Risk Assessment Framework (ORAF)

Africa: SAPP-Program for Accelerating Transformational Energy Projects (P126661)

Risks		
Project Stakeholder Risks		
Stakeholder Risk	Rating	**High**
Risk Description:	Risk Management:	
Even though preparation of projects is conducted according to best practice by the PAT, there is a risk that shifting priorities by the concerned countries could result in the projects not being subsequently implemented.	The implementation of projects selected for preparatory support is beyond the scope of this operation. Nonetheless, this risk can be mitigated by a careful selection of priority projects. The PAT and the SAPP Coordination Center will assess, among the other aspects, the level of support by Governments and their incentives to develop the projects, as well as the risk that projects may not materialize in the end.	
The new role attributed to the SAPP Coordination Center and the PAT may raise concern especially on the part of individual countries, which may fear losing authority in selecting and implementing projects.	The SAPP has been attributed a mandate to champion preparation of regional priority energy projects by SADC Energy Ministers. SAPP countries have identified and endorsed priority regional energy projects that need to be moved forward.	
The governance structure underpinning the Project may remain on paper and fail to guarantee strong commitment by governments and utilities to prepare/implemented the identified priority regional energy investments.	The Project builds on existing institutions and an established governance structure that pre-date discussions regarding the World Bank funded operation. The SAPP has solid convening capacity with the SADC Secretariat and Ministers and can play a key catalytic role in bringing together national and regional stakeholders. SAPP's strong day-to-day relationships with all the utilities in the region, which are ultimately responsible for project implementation, promise to facilitate ownership at national level. The Project proposal has been formally approved by the SAPP Executive Committee. The methodology developed by the SAPP to select regional energy projects to be moved forward has basically validated priority projects that were well-known and had a form of consensus in place. Implementation arrangements include key mechanisms to secure authorization and commitment at national level to move forward with the preparation of a specific project, such as the requirement for the concerned country to sign a letter of consent or for the multiple countries involved in a cross-border project to collectively enter a Memorandum of Understanding (something that is already a SADC requirement in the region).	
Member utilities may be suspicious that the PAT may be captured by one or a subset of members.	The PAT will work with and support member utilities, which will decide the extent of PAT's role. The PAT will be developed in a transparent manner and will report to the SAPP Coordination Center (and ultimately to the SAPP Executive Committee) which should ensure a balanced approach by the PAT to the different member countries.	
Other bilateral and multi-lateral institutions	The Bank team has carried out significant consultation during preparation to ensure that the Project is well	

may raise concern over the role of the proposed Project (and potential overlap vis-a-vis similar efforts in the region).	understood by regional stakeholders, that this effort is additional, and that there is opportunity for other bilateral and multi-lateral donors to join this effort going forward.					
Potential preparation of large and risky projects (such as large hydropower projects) can generate concern among civil society organizations.	Preparatory activities for the selected projects will comply with best-practice international safeguard standards and ensure that environmental, social and other risks are adequately mitigated. If needed, a Communication Specialist will be hired by the PAT to ensure effective communication with all concerned stakeholders and adequate information on project's impacts.					
	Resp: Client	Status: In Progress	Stage: Both	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS

Implementing Agency (IA) Risks (including Fiduciary Risks)						
Capacity	Rating	**Substantial**				
Risk Description:	Risk Management:					
The SAPP Coordination Center lacks the technical skills to adequately prepare regional energy projects.	Preparatory support will be implemented by the PAT, which will be created as part of this Project and will include a number of top-class experts covering the profiles required for the preparation and packaging of regional energy projects.					
The SAPP Coordination Center lacks adequate procurement and financial management (FM) capacity.	The Coordination Center will carry out FM and procurement functions only related to the hiring of the PAT staff. Once in place, the PAT will be responsible for both functions. The hiring of qualified FM and Procurement Specialists is an effectiveness condition. Detailed measures needed to mitigate FM and procurement risks related to the low capacity of the Coordination Center and any other risks related to the PAT performance are detailed in annex 3.					
Funds are not used appropriately or advances in projects are not big/impactful	Decisions over use of funds will be driven by the experienced and qualified PAT staff. A careful screening of projects will help to minimize the risk of projects not advancing sufficiently. Selection shall prioritize the projects with a higher chance of successfully completing preparation/reaching financial closure so as to ensure a few quick wins that can help establish the role of the PAT. In addition, the Bank team will coordinate closely with relevant CMUs throughout project preparation to monitor potential risks and develop mitigation strategies. The Bank team will also remain closely engaged with the individual countries on a bilateral basis, leveraging the relationships established through the extended energy portfolio in the region and ensuing country dialogue. On use of funds, there will be significant transparency (including monitoring and reporting to the Bank by the PAT staff) and oversight from the SAPP Executive Committee.					
	Resp: Client	Status: Not Yet Due	Stage: Implementation	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS
Governance	Rating	**Moderate**				
Risk Description:	Risk Management:					
The strategic objectives of the Coordination Center vis-a-vis its role in advancing regional	The Coordination Center has been formally mandated by SAPP Executive Committee and SADC to assume a proactive role in facilitating the preparation of regional projects.					

energy projects may change in a way that is not consistent with the Project's PDO. A new leadership at the Coordination Center may create a conflict with the PAT´s role and functions.	The current Manager of the Coordination Center Manager has been in place since the Center was established and will likely remain in office during the life of the Project and beyond. Even in the case that a new Manager is appointed, no conflicts are expected since the PAT fulfills a formal mandate assigned to the Coordination Center by the SADC and SAPP Executive Committee.					
	Resp: Client	Status: In Progress	Stage: Implementation	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS

Project Risks						
Design	Rating	**Substantial**				
Risk Description:	Risk Management:					
The PAT may face significant challenges in positioning itself and being perceived as a capable project preparation entity. The Project may fail to attract and or retain top notch and experienced staff to the PAT. This being a regional project, there is a risk that the choice of the location could be compromised by political considerations. Also, the location chosen does not enable regular access to regional developers and commercial banks and good transport access to the rest of the region for regular meetings with SAPP utilities and ministries. The type of support and the added value provided by the PAT may not be clear to project implementers. The amount set out under component B may prove inadequate fairly quickly.	The PAT will be established and care will be taken to set it up as a high-caliber, professional team which will work with projects' stakeholders in a credible manner and provide tailored and innovative support. The location and the remuneration package will need to be set attentively. In addition to being an attractive place to work for top caliber professionals, the location will need to enable easy access to regional developers and commercial banks and good transport access to the rest of the region for regular meetings with SAPP utilities and ministries. The importance of attracting the right staff and having the right location for the PAT has been made during a number of discussions and indications are that these issues will be taken seriously. Once a project is approved for preparatory support, the PAT will assess and adjust to the type of role it needs to play. The SAPP Coordination Center will clearly negotiate and agree upon with project implementers the type of services to be provided by the PAT. It is well understood by the SAPP that they will need to attract further funding from other sources as part of this engagement. A number of existing development partners have been already approached and the SAPP is optimistic that further funding will become available for activities under component B.					
	Resp: Client	Status: Not Yet Due	Stage: Both	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS
Social and Environmental	Rating	**Moderate**				
Risk Description:	Risk Management:					

The proposed Project will finance the preparation of complex regional energy projects that may have significant environmental and social impacts.	The development of environmental and social assessment and management systems which comply with international standards will be a key component of preparatory activities for the selected regional projects and will result in a range of safeguards instruments. The first of such instruments anticipated during project implementation is an overall Environmental and Social Management Framework, which will provide strategic guidance to the SAPP on the development and application of environmental and social criteria in the screening, prioritization, and development of priority regional energy projects. ToR for the ESMF have been prepared, approved by the Bank and disclosed.					
	Resp: Client	Status: In Progress	Stage: Implementation	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS
Program and Donor	Rating	**Moderate**				
Risk Description: Coordination with other donors that may later join in supporting the PAT may impose large transaction costs because of contrasting objectives and differences in the fiduciary processes and procedures.	Risk Management: The World Bank is viewed as a convening institution that adds important value and quality to project preparation. Notable examples includes the Nile Basin Initiative, where the Bank managed more than US$180 million through the Nile Basin Trust Fund on behalf of more than 15 bilateral donors for project preparation and implementation. Eventually leveraging other donors, coordinating and providing a seamless platform for supporting large projects are expected to be the big value proposition of this operation in the long-term. Transaction costs of working with other donors should be seen relative to these ambitious plans.					
	Resp: Bank	Status: In Progress	Stage: Implementation	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS
Delivery Monitoring and Sustainability	Rating	**Substantial**				
Risk Description: Monitoring and evaluation functions for the Project may not be adequate. The establishment of the PAT will create high expectations among a broad set of stakeholders in terms of rapid delivery of a number of bankable regional energy projects.	Risk Management: The Results Framework and Monitoring is simple and easy to monitor and the PAT staff will have clear mandate to provide data and information for monitoring Project's activities and results. In addition, the Project Implementation Manual will clearly explain how the M&E functions shall be carried out. Managing expectations of regional institutions and national governments will be a key task of the SAPP Coordination Center and the Bank's team will provide support through ensuing country dialogue as needed. It is expected that over time the PAT's services and activities will become more standardized resulting in a shorter preparation timeframe. Qualified staff will be essential for the adequate delivery of projects					
	Resp: Client	Status: Not Yet Due	Stage: Implementation	Recurrent: ☑	Due Date:	Frequency: CONTINUOUS
Overall Risk						
Implementation Risk rating: Substantial						
Risk Description: The new role attributed to the SAPP Coordination Center and the PAT may raise concern especially on the part of individual countries, which may fear losing						

authority in selecting and implementing projects. This may be especially the case for generation investments, which countries are keen to keep under control at national level. As a result, consensus on priority projects and commitment to take them forward may weaken. It will be critical to the success of the Project that the PAT is seen as a credible ('go-to') team within the region. There is a risk that experts of the appropriate caliber will not be available. These are professionals who are in the position to choose who they work for and where they work and the location of the office for the PAT will need to be carefully selected to be attractive to such talent.

Annex 5: Implementation Support Plan

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Implementation Support Plan

1. **Strategy and approach to implementation support**. The strategy for implementation support (IS) has been developed on the basis of the nature of the Project and its risk profile. The IS has been designed so as to guarantee efficient and flexible support to the client and facilitate implementation of the risk mitigation measures defined in the ORAF. The Bank's project team will closely coordinate with the SAPP Coordination Center and the PAT, ensuring timely project implementation support and providing advice on implementation issues as they arise.

2. **Regional and country dialogue**. The Bank's Task Team Leaders will maintain dialogue with the regional agencies and notably the SADC and the SAPP bodies as well as with the individual SAPP member countries concerned with the projects selected for preparatory support to strengthen focus on project implementation. They will leverage other World Bank country and operational teams to support dialogue with countries' governments and utilities and facilitate consensus on and commitment to advancing priority regional energy projects.

3. **Support to preparation of priority regional energy projects and analytical work.** The Bank will deploy technical supervision of the various activities carried out by the PAT with funding under component 2 and of the analytical work under component 3, so as to ensure that they meet the highest quality standards. Supervision will include but not limited to review of terms of reference for the contracting of consulting services; review of technical, economic and financial feasibility studies; review of legal and financial documentation related to transactions; review of regional studies; etc. In line with the World Bank's policy, the Bank team will conduct supervision missions at least twice a year. In coordination with the implementing agency's counterparts, the Bank's team will monitor progress against the result indicators agreed in the Results Framework and Monitoring, and verify their achievement. They will also monitor risks and update the risk assessment as needed, paying particular attention to the implementation risks.

4. **Procurement requirements and inputs.** The Bank's Procurement Specialist supporting the Project is based in Lusaka, Zambia and will ensure close support, advice and monitoring to the SAPP Coordination Center and the PAT. The Bank project team will help strengthen procurement management efficiency by: (i) reviewing relevant procurement documentation and providing timely feedback to the project counterparts; (ii) providing detailed guidance on the Bank's Procurement Guidelines as needed; and (iii) monitoring procurement progress against the Procurement Plan, which will be updated as required to reflect project implementation needs.

5. **Financial management requirements and inputs.** The Bank's Financial Management Specialist supporting the Project is based in Harare, Zimbabwe and will provide close monitoring of the project financial management. The Bank team will perform regular supervision and provide advice and capacity building to the SAPP Coordination until the PAT is established and

therefore to the PAT on financial planning, budget preparation, reporting and other relevant matters. The supervision strategy by the Bank's FM Specialist will comprise at least one on-site visit to the PAT for review of the FM system. The visit will be complemented by desk review of the consolidated IFRs submitted to the Bank at the end of each calendar quarter. In addition, the Bank FM team will also review the audited project annual financial statements and the auditor's report and management letter thereon each year and any other relevant information it becomes available. A detailed Financial Management Action Plan is presented in table 1.

Table 1: Financial Management Action Plan

FM Activity	Frequency
Desk reviews	
Interim financial reports review	Quarterly
Audit report review of the program	Annually
Review of other relevant information such as internal audit reports	Continuous
On site visits	
Review of overall operation of the FM system	Annual
Monitoring of actions taken on issues highlighted in audit reports, auditors' management letters, internal audit and other reports	As needed
Transaction reviews (if needed)	As needed
Capacity building support	
FM training sessions	Before Project starts and thereafter as needed

6. **Environmental and Social safeguards.** The Bank project team will maintain close monitoring of environmental and social management under the Project. In particular, the Bank's Environmental and Social Development Specialists will monitor the preparation of the Environmental and Social Management Framework as well as the development of terms of reference for the specific safeguards instruments that within the context of the ESMF preparation will be found to be required for the identified investment projects. The Bank team will closely liaise with the PAT and provide advice and capacity building to ensure that the ESMF and the specific safeguards instruments are in line with international good practice and the World Bank's safeguards policies, as well as take into consideration national environmental legislation as applicable.

7. **Mid-term review**. A mid-term review will be carried out approximately halfway through project implementation and encompass an in-depth stocktaking of Project's performance. The mid-term review will assess progress towards achieving the Project Development Objective and results under the various project activities. In the event of major deviations from the intended results or delays in their achievement, the Bank team will identify corrective actions in coordination with project counterparts. The mid-term review will also assess any need for changes in the project scope or implementation arrangements and identify and agree with project counterparts the related adjustments.

8. Tables 2 and 3 below map out the proposed Implementation Plan, Skills Mix and other Inputs required.

Table 2: Implementation Plan

Time	Focus	Skills Needed	Resource Estimate
First 12months	Establishment of PAT;	Technical; procurement	US$200,000
	Selection of priority regional energy projects and definition of the scope of preparatory support for each of them;	Technical	
	Recruitment of consultants for implementation of activities related to preparation of the selected priority regional energy projects and for preparation of regional studies	Technical; procurement	
	Establishment of procurement arrangements	Procurement	
	Establishment of FM arrangements and systems	Financial Management	
	Implementation of environmental and social safeguards	Social development; environmental	
	Dialogue with project stakeholders at regional and country level	Technical	
	Coordination with other multi-laterals and bi-laterals on regional project preparation	Technical	
12-76 Months	Technical supervision	Technical	US$ 1,000,000
	Safeguards supervision	Social development; environmental	
	M&E supervision	Technical	
	Procurement& FM supervision	Procurement and FM specialists	
	Dialogue with project stakeholders at regional and country level	Social and environmental specialists	
	Coordination with other multi-laterals and bi-laterals on regional project preparation	Technical	

Table 3: Skills Mix Required

Skills Needed	Number of Staff Weeks	Number of Trips	Comments
2 TTLs/Sector Specialists	6 SWs annually first twelve months; 4 SWs annually afterwards	2 per annum (TTL will require additional travel to ensure coordination with other multi-laterals and bi-laterals)	Based in Washington, DC
Energy Specialist Consultant + other Specialists mobilized on a need basis	6 SWs annually first twelve months; 5 SWs annually afterwards	2 per annum (Energy Specialist Consultant only)	
Procurement	3 SWs annually first twelve months; 2 SWs annually afterwards	2 per annum	Based in Lusaka, Zambia
FM	3 SWs annually first twelve months; 2 SWs afterwards	2 per annum	Based in Harare, Zimbabwe
Environmental Specialist	2 SWs annually first twelve months; 1 SWs afterwards	2 per annum	Based in Nairobi, Kenya
Social Specialist	1 SWs annually first twelve months; 1 SWs afterwards	2 per annum	Based in Washington, DC

Annex 6: SAPP Member Countries Power Sector Statistics

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Table 1: Electricity access rates in Southern African countries (2009 data)

	Electrification rate (%)	Population without electricity (ml.)
Angola	26.2	13.7
Botswana	45.4	1.1
DRC	11.1	58.7
Lesotho	16.0	1.7
Madagascar	19.0	15.9
Malawi	9.0	12.7
Mauritius	99.4	0.0
Mozambique	11.7	20.2
Namibia	34.0	1.4
South Africa	75.0	12.3
Tanzania	13.9	37.7
Zambia	18.8	10.5
Zimbabwe	41.5	7.3
Southern Africa	**27.8**	**193.2**

Source: IEA (2011). "World Energy Outlook"

Table 2: Installed capacity vs. demand (2012/2013 data)

No.	Country	Utility	Installed Capacity [MW] As at March 2013	Available Capacity [MW] March 2013	Suppressed Demand & Forecast Demand
1	Angola	ENE	1,793	1,480	1341
2	Botswana	BPC	352	322	604
3	DRC	SNEL	2,442	1,170	1398
4	Lesotho	LEC	72	72	138
5	Malawi	ESCOM	287	287	412
6	Mozambique	EDM /HCB	2308	2,279	636
7	Namibia	NamPower	393	360	635
8	South Africa	Eskom	44,170	41,074	42416
9	Swaziland	SEC	70	70	255
10	Tanzania	TANESCO	1380	1,143	1444
11	Zambia	ZESCO / CEC/LHPC	1,870	1,845	2287
12	Zimbabwe	ZESA	2,045	1,600	2267
TOTAL SAPP			51,182	51,702	53,833
Total Interconnected SAPP			53,722	48,792	50,636

Source: SAPP Annual Report 2013

Table 3: SAPP utility generation mix (%; 2012/2013 data)

Technology / Utility	BPC	EDM	ENE	ESCOM	Eskom	LEC	NamPower	SEC	SNEL	TANESCO	ZESA	ZESCO	Total
Base Load Hydro	0%	91%	55%	100%	5%	100%	61%	88%	100%	50%	37%	99%	17.4%
Coal	64%	0%	32%	0%	86%	0%	34%	13%	0%	0%	63%	0%	72.9%
Nuclear	0%	0%	0%	0%	4%	0%	0%	0%	0%	0%	0%	0%	3.5%
CCGT	0%	0%	13%	0%	0%	0%	0%	0%	0%	43%	0%	0%	1.2%
Distillate	36%	9%	0%	0%	5%	0%	5%	0%	0%	7%	0%	1%	5.0%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

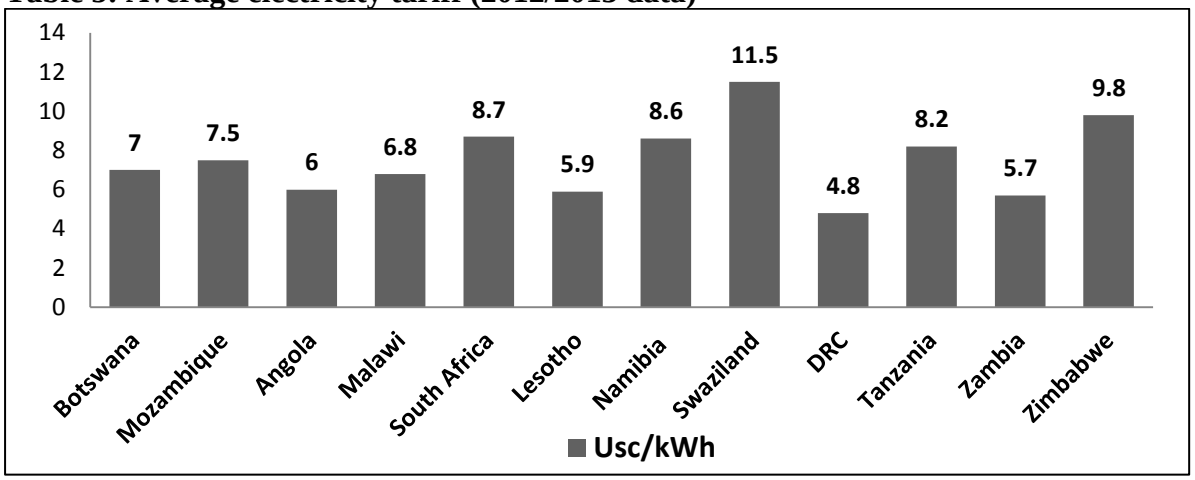
Source: SAPP Annual Report 2013

Table 4: Peak demand forecast (MW; 2012/2013 data)

YEAR	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025
Angola	1,320	1,426	1,540	1,657	1,762	1,872	1,987	2,109	2,226	2,347	2,472	2,601	2,734	2,871
Botswana	817	864	904	928	951	1,034	1,089	1,164	1,183	1,202	1,221	1,238	1,255	1,272
DRC	1,655	1,723	1,795	1,865	1,935	2,016	2,100	2,187	2,229	2,313	2,409	2,509	2,614	2,723
Lesotho	152	156	160	165	169	174	178	183	188	193	198	204	209	214
Malawi	394	412	430	448	467	485	503	522	541	560	577	594	611	629
Mozambique	690	722	757	793	821	857	894	933	974	1,017	1,061	1,108	1,157	1,208
Namibia	576	599	623	651	675	703	730	754	779	815	845	875	900	933
South Africa	42,923	44,005	44,998	45,952	46,878	47,713	48,593	49,398	50,316	51,166	51,797	52,425	53,336	53,878
Swaziland	245	255	264	271	278	287	293	300	304	308	311	315	319	323
Tanzania	916	955	995	1,037	1,081	1,126	1,174	1,223	1,275	1,328	1,384	1,442	1,503	1,566
Zambia	1,894	1,919	1,944	1,970	2,015	2,061	2,102	2,143	2,171	2,228	2,272	2,302	2,361	2,407
Zimbabwe	2,414	2,484	2,558	2,643	2,731	2,822	2,917	3,014	3,115	3,220	3,327	3,439	3,554	3,674
Total Interconnected	51,366	52,727	54,003	55,238	56,453	57,667	58,896	60,076	61,259	62,463	63,441	64,415	65,705	66,632
Total SAPP	53,996	55,520	56,969	58,380	59,762	61,150	62,560	63,930	65,301	66,698	67,873	69,052	70,553	71,698

Source: SAPP Annual Report 2013

Table 5: Average electricity tariff (2012/2013 data)



Source: SAPP Annual Report 2013

Annex 7: Economic Analysis

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Project Development Impact

1. Primary beneficiaries of the development of regional energy projects and therefore of the proposed Project will be the citizens of the Southern Africa Region. Expanded, cheaper and more reliable electricity supply is central to economic and social growth in the Southern Africa Region. It is estimated that the region may be losing up to 4 percent of GDP annually as result of unmet power demand reducing economic investment, productivity and employment. The development of large generation sources and associated transmission infrastructure will ensure cost-effective electricity supply for countries in the Southern Africa region that are or are close to becoming energy constrained. In particular, countries that are likely to import electricity will benefit from the increased electricity consumption from reliable sources. Countries where large generation projects are likely to be developed will also gain from the revenues of electricity exports.

Rationale for Public funds

2. The proposed Project has an intrinsic rationale for public provision, because of its nature – technical assistance – and its regional scope. One of the Project's main tasks – building capacity and maintaining institutional legitimacy amongst regional institutions, governments, utilities and regulators – is largely in the domain of public funding sources.

3. Adequate project preparation is critical to increase project bankability and therefore is a precondition to attract private participation. The preparation of large and complex cross-border projects entails high upfront costs that will be difficult to cover with commercial financing alone, given the risks involved. Regional and project-specific analysis carried out under the Project will also strengthen institutional, planning and project management capacity at both regional and country level.

World Bank's Value Added

4. The Bank can bring significant added value to this Project in light of its experience in supporting preparation and implementation of regional energy projects in Africa and other developing regions. The Bank has been at the forefront in supporting regional power integration in Africa. Regional projects in all four power pools account for a large share of the Bank's overall energy portfolio in Africa, including both flagship operations and technical assistance. Many regional projects have been developed through complex PPPs, some through the establishment of SPVs involving multiple countries, with the Bank providing critical support to align political economy incentives, build political consensus and overcome regulatory barriers.

5. This particular Project is intended to lead to a step-change in preparation activity on regional projects, and the Bank is uniquely positioned to provide high-level technical guidance as well as play an important convening role. It is expected that this Project will leverage further

bilateral and multi-lateral funds to support project preparation in a coordinated manner and in a manner that maintains significant ownership by the national governments and their utilities. Important precedent includes the Nile Basin Initiative where the Bank managed more than US$180 million through the Nile Basin Trust Fund on behalf of more than 15 bilateral donors for project preparation and implementation.

Analysis of Economic Benefits

6. The economic evaluation of a technical assistance project is a conceptual exercise and is even more so in the case of this particular Project, which will support preparation of a number of transformational regional projects that remain to be identified. Nonetheless, a range of direct and indirect economic benefits can be defined.

7. Direct economic benefits relate to the lower costs of preparation of regional energy projects resulting from coordination at regional level as well as increased speed and quality of preparation. Although quantifying such benefits is impossible ex ante, they should not be neglected. Establishing technical expertise at the regional level avoids the need to cultivate these scarce skills repeatedly within individual countries. Also, by leveraging the institutional credibility of the SAPP, the PAT will speed up preparation and implementation of large trans-boundary projects. For some regional projects the coordination costs may be so prohibitive that in the absence of the proposed Project, they would not be executed. High quality preparation reduces/mitigates risks and should increase the incidence of investment in economically beneficial projects.

8. Indirect economic benefits relate to the large efficiency gains associated to the optimization of generation and transmission investments at a regional rather than at the national level. The Project is assumed to contribute to achieve such benefits by creating the enabling conditions for regional coordination. Broadly, the economic benefits from the regional coordination of electricity infrastructure development can be defined as follows:

(a) Lower cost of electricity, because of the development of least cost sources and the reduced capacity redundancies through trade of electricity;
(b) Savings in generation expansion investments, because of economies of scale that are no longer constrained by domestic demand; and
(c) Fewer constraints related to domestic fuel or resource availability and likely increase of hydropower in the energy mix, leading to significant environmental benefits – especially if the alternative is coal powered generation.

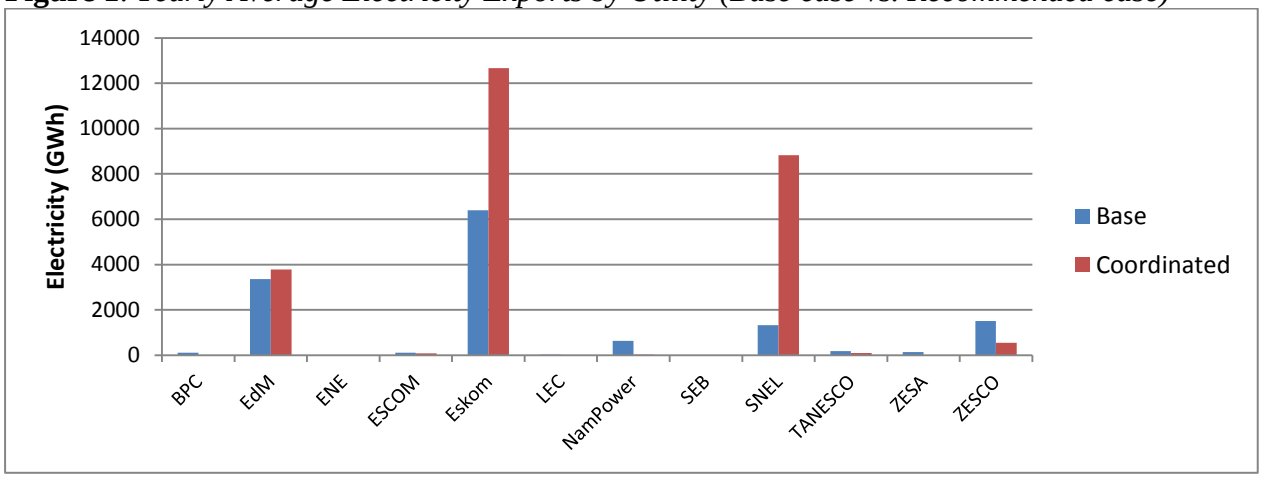
9. The SAPP Pool Plan has identified the coordinated generation and transmission investments that allow accommodating fast increasing electricity demand in the region at the least cost over the period from 2006 to 2025. As part of the analysis, the Plan has sought to demonstrate the economic benefits of a more regionally interconnected power pool by considering two scenarios: a ‘base-case’ that is an aggregation of individual national plans; and a ‘recommended case’ envisaging a generation and transmission expansion program optimized on a regional rather than national basis. Both scenarios are further varied using different load forecasts or introducing constraints such as carbon dioxide emission reductions or compulsory use of defined technologies such as nuclear power generation, which had been pre-committed by

South Africa while the Plan was under preparation. In particular, the Plan considers two scenarios for total system and peak demand growth in the region, assuming respectively an average growth rate of 3 and 4 percent per year. The analysis assumes free trade, no constraints on the expansion of the interconnecting lines, and removal of the constraints within the utilities internal networks. Although the figures date back to 2009 and require updating, the comparison is instructive.

10. Coordination of generation and transmission investments would earn the SAPP region significant savings over the 20 year period, primarily due to reduction in capital costs (representing about 85 percent of the cost savings in present value terms). Lower costs result from the ability to source power from low cost sources in the region rather than developing relatively more expensive domestic resources. The possibility to complement domestic supply with imports in the 'recommended' scenario enables more efficient generation and supply of electricity, including a reduction of excess capacity above reserve requirements across the region. In particular, under the 'recommended' scenario and assuming an average regional demand growth rate of 3 percent, the region would save US$4.8 billion, because of the lower generation capacity addition needed to meet regional demand (36GW, as opposed to 38.7GW needed in the base-case). Assuming regional demand growth at 4 percent per year, the generation capacity additions needed under the 'recommended' scenario total some 57GW, 4.7GW less than in the base-case, with associated cost savings of US$5.2 billion. Savings increase to US$8.7 billion once the constraint of pre-committed nuclear capacity is removed and the environmental costs of CO_2 are held at zero.[15]

11. The study forecasts that with regional coordination, electricity exports would be more than double the amount of the base-case. Mozambique, South Africa and DRC are projected as the largest exporters, with the DRC increasing its electricity exports by over six-fold as compared to the base case.

Figure 1: *Yearly Average Electricity Exports by Utility (Base case vs. Recommended case)*



Source: Nextant(2009). **Note**: The recommended case here considers South African nuclear capacity expansion as pre-committed.

[15] This is about $5.85 billion and $9.78 billion respectively in 2013 dollars. As the analysis by Nexant is over the period from 2006-2025, the 2006 dollar value is presented here.

12. Finally, the estimated gains from increased interconnectivity compared to the base case have been found to be robust to changes in key parameters such as the cost of greenhouse gas emissions (which results in making fossil fuel based projects like coal plants more costly), hydro conditions, demand, forced outage rates, and other parameters.

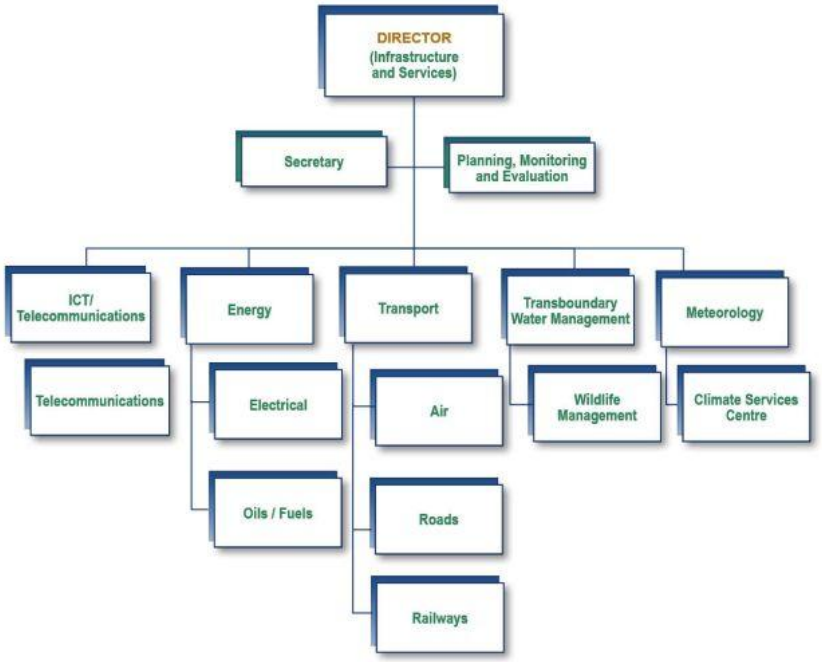
Annex 8: SAPP Institutional and Governance Structure

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

1. Promoting regional integration in the energy sector in Southern Africa is a key priority of the SADC, which has developed strategies and established dedicated agencies that together form a consolidated regional institutional architecture. This includes dedicated SADC bodies, the Southern Africa Power Pool and the Regional Electricity Regulators Association.

2. The SADC is governed by the Council of Ministers of member countries, which oversees the functioning and development of the SADC region and ensures that policies are properly implemented. The Council consists of Ministers from each Member State, usually Ministers of Foreign Affairs, Economic Planning or Finance. Energy Ministers can be called upon to form part of the Council when energy issues are being considered. The principal executive body of the SADC is the Secretariat, which is responsible for strategic planning, facilitation and coordination and management of all SADC programs. The Secretariat has two Deputy Secretaries. Among these, the Deputy Executive Secretary for Regional Integration is responsible for five Directorates that together cover all SADC's regional integration themes. The Infrastructure and Services Directorate focuses specifically on the development and quality of strategic infrastructure in the region. The technical oversight of energy related issues falls under this Directorate (figure 1).

Figure 1: Structure of the SADC's Infrastructure and Services Directorate



3. 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. Since the adoption of the Protocol on Energy, the SADC has also enacted several strategic plans for energy development in the region, including the SADC Energy Cooperation Policy and Strategy in 1996, the SADC Energy Action Plan in 1997, the SADC Energy Activity Plan in 2000, and most recently the Regional Infrastructure Development Master Plan and its Energy Sector Plan in 2012.

4. The Southern African Power Pool was created in 1995 with the mandate to facilitate the development of a competitive electricity market in the Southern African region and ensure reliable, efficient and sustainable electricity supply to all its members. The SAPP includes twelve SADC countries (Angola, Botswana, DRC, Lesotho, Malawi, Mozambique, Namibia, South Africa, Swaziland, Tanzania, Zambia, and Zimbabwe), of which nine are operating members, namely 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 is governed by four agreements, including: (a) the Inter-Governmental Memorandum of Understanding which enabled the establishment of SAPP; (b) the Inter-Utility Memorandum of Understanding, which established SAPP's basic management and operating principles; (c) the Agreement between Operating Members which established the specific rules of operation and pricing; and (d) the Operating Guidelines, which provide standards and operating procedures. In 2006 the Inter-Governmental Memorandum of Understanding was revised to extend SAPP membership to transmission companies and independent power producers (IPPs). The Agreement between Operating Members and the Operating Guidelines are also under review.

5. 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 (figure 2). The Executive Committee is composed of the Chief Executives of member countries' utilities and has a chairperson appointed on a rotational basis among the members that have signed the Agreement between Operating Members. The Executive Committee has the ultimate authority to amend the duties of the other SAPP bodies.

6. A number of sub-committees, including the Planning, Operating, Environmental, and Markets Sub-committees, supervise technical issues under the direction of the Management Committee. In 2002, a Coordination Center was established in Harare, Zimbabwe as an arm of the Operating Subcommittee to monitor operations and transactions within the Pool, including controlling dispatching operations and serving as trading center for electricity auctions. The Coordination Center is the first body with responsibility of regional power market oversight and operation established in Africa. The Center also serves as secretariat for the SAPP committees and sub-committees and its activities are financed by SAPP members through an annual subscription.

Figure 2: SAPP's Organogram

7. Established as a loose pool, the SAPP has made strides to move towards a tighter market structure and facilitate short-term trade. A Short-Term Energy Market (STEM) was introduced in 2001 with access restricted to power utilities, to facilitate the trading of surplus power not covered by bilateral contracts. Bids and offers were made via an internet platform. The market was operated by the Coordination Center, which checked the capacity of the transmission lines and matched offer and demand at the seller's price. In 2009 the STEM has been replaced by the Day-Ahead Market (DAM), a fully competitive auction market open to utilities, independent power producers, transmitters and distributors. Under the DAM, the Coordination Center matches total bids and offers to establish a market-clearing price that is used to settle all transactions. Although STEM and DAM constitute notable innovations, the SAPP market continues to be dominated by bilateral trade. On average, STEM accounted for only 5-10 percent of the energy traded in the region, DAM currently accounts for no more than 1 percent. With the depletion of surplus capacity into SAPP and member countries exposed to concerns of supply security, the share of short-term power trading can only decrease. In a pool with little surplus generation, there is a considerable risk of a utility falling short of its energy requirements. As a result, utilities may increasingly resort to Power Purchase Agreements (PPAs) for the bulk of their demand requirements and use the DAM for 'top-up' requirements.

8. The Regional Electricity Regulators Association was established in 2002 by SADC Energy Ministers with the objective to ensure a consistent and harmonized regulatory framework in the energy sector within the region. RERA is not a regional regulator, in the sense of having authority and power in regulatory matters, but rather a formal association of national regulators. Currently, RERA has three main functions: (a) facilitate regulatory capacity building among members at both national and regional levels through information sharing and skills training; (b) facilitate harmonized electricity sector policy, legislation and regulations for cross-border trading, focusing on terms and conditions for access to transmission capacity and cross-border tariffs; and (c) deliberate and make recommendations on issues affecting the economic efficiency of electricity interconnections and electricity trade that fall outside national jurisdiction. The

interaction between SAPP and RERA is regulated by a memorandum of understanding entered into in 2007. Their cooperation in helping member countries harmonize their regulatory policies, legislation, standards and practices is intended to increase regional power trade and is also oriented toward opening up opportunities for increased public and private investments in generation.

Annex 9: SAPP Priority Generation and Transmission Projects

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

A. The methodology for selecting priority regional generation projects

1. The SAPP Regional Generation and Transmission Expansion Plan commissioned by the SAPP in 2001 and updated in 2009 has identified a detailed list of priority generation and transmission projects that allow accommodating fast increasing electricity demand in the region at the least cost over the period from 2006 to 2025.

2. In 2005 the SAPP started developing a thorough methodology to identify, among the generation and transmission projects included in the SAPP Pool Plan, those that should be given highest priority by member countries and promoted for investment. The methodology for screening generation projects is based on the use of eight selection criteria (table 1), including: (a) size of the project; (b) levelized costs; (c) availability of associated transmission infrastructure; (d) economic impact; (e) commissioning date; (f) share of capacity already committed; (g) share of capacity available for regional power trade after commissioning; and (h) number of participating countries.

Table 1: Selection criteria

1.	**Size of the Project**	Expected output in MW
2.	**Levelized costs**	Discounted O&M, variable, environmental mitigation and transmission integration costs
3.	**Availability of associated transmission infrastructure**	Transmission infrastructure needed to evacuate power from the plan
4.	**Economic impact**	Economic benefits accruing to the participating countries and to the region as a whole
5.	**Commissioning date**	Date construction will be completed and the plant ready for operation
6.	**Share of capacity already committed**	The amount of power that has been committed for sale through Power Purchase Agreements, etc.
7.	**Share of capacity available for regional power trade after commissioning**	The amount of capacity that will be available for exports after project commissioning
8.	**Number of participating countries**	Number of countries involved in the project

3. Criteria are assigned different weights with the largest being attributed to levelized costs, size of the project – defined in terms of installed capacity – and share of capacity available for regional power trade. Table 2 present the scoring system used to rank projects.

Table 2: Scoring system

Item	Criteria	Weight %	1 Weak	2 Below Standard	3 Standard	4 Above Standard	5 Best
1	Size of the Project (MW)	15	<50	50-200	200-500	500-1000	>1000
2	Levelized costs (USD/MWh)	25	>=131	101 - 130	71 -100	41 - 70	<= 40
3	Availability of associated transmission infrastructure (km of lines needed)	10	>750 km	101-750 km	50-100 km	<50km	0

4	Economic impact (descriptive)	10	Little impact, limited to small area	National impact only - jobs, >GDP	Mainly national impact - jobs, >GDP and some regional benefit	Balance between regional and national impact	Mainly regional impact - jobs, > GDP
5	Commissioning date (year)	10	After 2019	2018	2017	2016	2015
6	Share of capacity already committed (%)	10	<20	21 - 35	36 - 50	51 - 80	81 -100
7	Share of capacity available for regional power trade after commissioning	15	<20	21 - 35	36 - 50	51 - 80	81 -100
8	Number of participating member countries (#)	5	1	2	3	4	>= 5

4. More recently, the methodology has been refined to control for key factors. In particular, in addition to the criteria defined above, the selection of priority projects shall ensure the following:

(i) ***Fuel diversity***, namely an adequate balance between renewables- and non-renewables- based technologies, which would allow reducing carbon footprints at a regional level;

(ii) ***Geographical spread*** *and* ***regional impact of projects***. The geographical spread is expected to minimize country-specific risks. Projects generating large and equally distributed benefits to the region are expected to attract more commitment by participating countries;

(iii)***Project readiness***. Projects with a close commissioning date are eligible for selection only if an environmental impact assessment and the relevant feasibility studies have been completed.

B. List of selected priority regional energy projects

5. Based on the methodology above, the SAPP has identified priority generation projects, classified in two categories: (i) priority projects with a capacity above 1,000 MW; and (ii) priority projects with a capacity below 1,000 MW. Tables 3 and 4 present an extract of the identified projects[16].

Table 3: Priority Generation Projects with Score > 50% and Capacity > 1000 MW

Ranking	Country	Project Name	Capacity (MW)	Technology	Expected Commissioning Date
1	Mozambique	HCB North Bank	1245	Hydro	2015
2	Mozambique	Mphanda Nkuwa	1500	Hydro	2017
3	Zambia / Zimbabwe	Batoka	1600	Hydro	2022
4	DRC	Inga 3	4320	Hydro	2018
TOTAL			**8,665 MW**		

Table 4: Priority Generation Projects with Score > 50% and Capacity < 1000 MW

Ranking	Country	Project Name	Capacity (MW)	Technology	Expected Commissioning Date
1	Namibia	Kudu	800	Gas	2016

[16] The full list includes 21 generation projects, including coal and nuclear projects.

2	Namibia	Baynes	360	Hydro	2018
3	Zambia	Lunsemfwa Lower	255	Hydro	2016
4	Zambia	Kalungwishi	220	Hydro	2016
5	Zamiba	Lusiwasi	86	Hydro	2017
6	DRC	Zongo 2	120	Hydro	2016
7	Tanzania	Rumakali	520	Hydro	2018
8	Zambia	Mambilima Falls site 1&2	425	Hydro	2019
9	Zambia	Mpata Gorge	543	Hydro	2023
10	Malawi	Lower Fufu	100	Hydro	2015
11	Tanzania	Ruhudji	358	Hydro	2017
		TOTAL	**3,787 MW** Hydro – 2,987 MW Gas – 800 MW		

6. Three main categories of transmission projects have also been identified (table 5), including: (a) transmission links to connect non-operating members of the SAPP; (b) interconnections to relieve congestion; and (c), transmission associated to generation projects.

Table 5: Priority Transmission Projects

A. TRANSMISSION PROJECTS TO RELIEVE CONGESTION				
Project Name	**Countries**	**Capacity (MW)**	**Expected Date**	**Comment**
ZIZABONA	Zimbabwe, Zambia, Botswana, Namibia	600	2015	Advisors to be appointed for 2nd phase. Preparatory funds received from NEPAD-IPPF to the tune of US$2 million
Central Transmission Corridor	Zimbabwe	300	2014	Grant funding received from DBSA to the tune of US$300,000 for EIA
Kafue-Livingstone Upgrade	Zambia	600	2013	Completed. EIB and IDA funding
North West Upgrade	Botswana	600	2014	EIA to be done
B. TRANSMISSION PROJECTS TO INTERCONNECT NON-OPERATING MEMBERS				
Project Name	**Countries**	**Capacity (MW)**	**Expected Date**	**Comment**
Zambia-Tanzania	Zambia, Tanzania	400	2016	
Mozambique-Malawi	Malawi, Mozambique	300	2015	Preparation and investment being supported by IDA
Namibia-Angola	Angola, Namibia	400	2016	
DRC-Angola	Angola, DRC	600	2016	
C. TRANSMISSION PROJECTS ASSOCIATED WITH NEW GENERATION				
Project Name	**Countries**	**Capacity (MW)**	**Expected Date**	**Comment**
Mozambique Backbone	Mozambique	3100	2017	Dependent on Mphanda

(STE)				Nkuwa
2nd Mozambique-Zimbabwe	Mozambique, Zimbabwe	500	2017	
2nd Zimbabwe-South Africa	South Africa, Zimbabwe	650	2017	
2nd DRC-Zambia	DRC, Zambia	500	2017	

7. 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.

Annex 10: Excerpt of the 2008 SADC Communique

SOUTHERN AFRICAN POWER POOL (SAPP) –
Program for Accelerating Transformational Energy Projects

SADC ENERGY MINISTERS TASK FORCE MEETING
21 FEBRUARY, 2008, GABORONE, BOTSWANA

FINAL RECORD

1.0 PRELIMINARIES

The meeting of the SADC Energy Ministers Task Force was officially opened by the Hon. P.H. K. Kedikilwe, Minister of Minerals, Energy and Water Resources of Botswana. The Executive Secretary of SADC, H.E. Dr Tomaz Salomao gave some brief Remarks on the Status of Power Supply in the SADC Region.

In the absence of the Chairperson of the Task Force, the Minister of Mines and Energy of the Republic of Namibia, Hon. Erikki Nghimtina, the meeting was chaired by The Minister of Energy and Power Development of Zimbabwe, Hon. Lt General (Rtd) Michael Nyambuya, M.P.

2.0 BACKGROUND AND RATIONALE

The Task Force recalled that Council at its meeting held in Grand Bae, Mauritius, in August, 2004, constituted a Task Force comprising Energy Ministers from Angola, Namibia, South Africa and Zimbabwe, assisted by their utilities, the SADC Secretariat, the Southern African Power Pool (SAPP) and the Regional Electricity Regulators Association (RERA) to develop a road map, in consultation with all the SADC Member States, aimed at addressing the then projected decline and deficit in power shortfalls in the region.

The Task Force noted the recent decline in power supply in almost all Member States, which has threatened to adversely affect economic growth, job creation, regional competitiveness as well as lifestyles of SADC nationals. Most SADC Member States have been compelled to introduce load shedding, which in turn has reduced investor confidence for the region.

The Task Force noted that, following consultations involving the Chair of SADC, the Executive Secretary, Member States and relevant key stakeholders, relating to the critical power shortage in the region, it was deemed opportune, that the SADC Energy Ministerial Task Force urgently convenes a meeting in Gaborone, Botswana, to consider the revised Road Map put together by the SADC Secretariat, SAPP, RERA and the utilities, to address generation capacity shortfalls in

the region. In addition the following key countries were invited; Mozambique as a major power producer in the region, Botswana as the host and Zambia as the present Chair of SADC.

3.0 ……

4.0 ……

5.0 ……

6.0 THE SADC POWER SECTOR ENABLING ENVIRONMENT

i) Policy, Legislation and Regulatory Framework

The Task Force noted that in view of the current power supply challenges in the region, the national and regional energy policy, legislation and regulatory frameworks need to be reviewed so that they are responsive to the critical power deficit in the region. The region needs to work towards the harmonization of national energy policies so that complementarities in resources are reconciled with self-sufficiency goals. This would enable projects in the region to be ranked on the basis of size and unit least cost.

The Task Force also considered the implementation of appropriate policies, legislation and regulatory frameworks which are supportive to the promotion of efficient use of energy in the region.

The Task Force further considered reforms aimed at improving sector governance and performance, which should include the following elements:

i) unbundling(separating of the power utility into different business unit and ultimately into different companies) with, at the very least, separate accounting for the constituent elements of the industry;

ii) mechanisms to allow competition in generation and distribution, where feasible; at the very least, steps should be taken to stimulate and encourage Independent Power Producers (IPPs) and Public-Private Partnerships (PPPs);

iii) a neutral entity should coordinate the matching of generation and demand and should institute the necessary technical rules for fair access to transmission and distribution networks; and

iv) empowered and independent regulatory regime.

The Task Force noted that RERA is in the process of implementing the following projects in 2008:

1. Development of a model "Law" that embraces best Electricity Supply Industry (ESI) practices;

2. Development of model regulatory frameworks for IPPs and renewable energy; and

3. A study on the SADC member countries Electricity Supply Industry institutional review of the regulatory framework.

The Task Force noted that RERA will:

i) work towards the harmonization of national electricity policy frameworks;

ii) accelerate the pace of ESI reforms to improve governance and performance;

iii) develop and implement the necessary national policies and promulgate legislation that will ensure:

   a) promotion of power conversation practices;

   b) implementation of efficient energy standards (e.g., building standards - mandatory installation of solar water heaters in new buildings);

   c) possibility of phasing out the use of incandescent lights; and

   d) incentives for demand-side management (DSM), and conversion to gas heating, solar heating and lighting systems.

ii) Tariff Regime

Investment incentives for both local and foreign investors in the power sector, which include the enabling environment and exemption from VAT and tax for a defined period.

The Task Force noted that, generally, tariffs in the region have remained at sub-economic levels and have not been able to provide the right signals for optimum use of electricity and attraction of new investments. Similarly, the sub-economic tariffs have also resulted in adverse consumer behaviour with regard to uneconomic use of electrical power. Most of the equipment is more than 20 years old and in dire need of rehabilitation and/or replacement. There has been no significant new investment into the ESI over the last two (2) decades although SAPP had forecasted, as far back as 2000, that the region would run out of excess capacity. This has immensely contributed to poor performance of some utilities, which compromises their ability to transact normal commercial activities. There is need to improve the investment climate in the region and tariffs are critical to most investment decisions.

A study is currently underway to review the tariff setting principles for the region. The study shall be completed by mid2008. The study seeks to motivate cost reflective tariffs for timely implementation of new power projects in the region. The indicative cost of new generation is around 5-8 USc/kWh, versus an average selling price of 3-4 USc/kWh

The SAPP Tariff Study will highlight the following:

- Cost reflectiveness of the tariffs in member countries
- Competitiveness of tariffs regionally and internationally
- Implications of capacity expansion projects on tariffs
- Energy efficiency implications on tariffs, and
- Analyze and recommend best practices.

The Task Force also noted that the principle of cost reflective tariffs was adopted at the SADC Energy Ministers' meeting in Harare, Zimbabwe in April 2007. However, some of the SADC countries have not yet implemented this principle.

The Task Force further noted that RERA is in the process of implementing the following projects in 2008:

1) A study to move towards cost reflective tariffs and the impact on economies in the SADC region; and

2) A study on pro-poor electricity supportive tariffs.

3) The SAPP Tariff Study will also provide input into the RERA study.

The Task Force noted the importance of implementing the principles of cost reflective tariffs as a matter of urgency

The Task Force directed that a strategy to deal with the issues relating to an enabling environment be developed

7.0 REVISED ROAD MAP TO SPEED UP IMPLEMENTATION OF POWER SECTOR PROJECTS.

7.1 Projects Financing

The Task Force noted that, among the key constraints that have given rise to the slow pace of implementation of power projects, is the shortage of financing for the same.

A number of facilities, such as the DBSA/AFD-PPFS, NEPAD-IPPF managed by the AfDB, KFW and FMO, have been created to support the preparation of regional infrastructure projects. Access to these funds is by direct application to facility management (DBSA, KFW, ADB, FMO) by the project sponsor who could be either a designated government entity or Regional Economic Community (REC) for financial

support to prepare a particular project. The DBSA/AFD and NEPAD-IPPF have agreed to use a common application format.

Despite the existence of some challenges facing the region, Southern Africa offers immense investment opportunities with high and sustainable returns and manageable risks. What is needed is to coordinate efforts and benefits from economies of scale through regional approach to sourcing of funds to ameliorate the power problems.

The Task Force directed that the following actions be undertaken:

1) DBSA to be requested to commission a study that will recommend a financing model for cross boarder projects

2) SADC/SAPP to assume a direct responsibility for coordinating and monitoring project implementation

3) Implement capacity building programmes in project management aspects focusing on project packaging for Member States

4) Member States should make full use of project preparation facilities to package projects

5) SADC should follow up on international pledges made to finance NEPAD regional projects – US$25 billion by the G8 countries, US$5 billion by UK, US$2 billion by Japan, and other pledges by Russia, India and China.

7.2 Proposed Institutional Arrangements to Accelerate Implementation of Projects

The Task Force noted that implementation of power projects, has been slow. Some projects that were included in the Pool Plan of 2001 as short term projects have not been implemented to date.

The Task Force further noted that championing of the trans-boundary projects is inadequate. This challenge is associated with the financing mechanism, which is premised on bilateral agreements with host countries. There is need for appropriate structures to be established and strengthened to drive the implementation of regional projects.

The Task Force considered and approved the structure below, whose key elements require strengthening and support for them to be more effective:

- SADC Ministers responsible for Energy with ultimate oversight on the Power Sector Projects Road Map.

- The Energy Ministerial Task Force, to review the pace of implementation of Power sector projects once every six months and report to the Energy Ministers. It is recommended that the mandate of the Task Force be extended by another two years.

- SADC Secretariat Project Coordination Unit, shall be responsible for strategic coordination of implementation of infrastructure projects, which includes, project development, packaging, monitoring and reporting process in conjunction with the Member States, SAPP, RERA and Key International Partners. The key partners shall be granted observer status at all meetings where project review is being undertaken.

- Project Teams, composed of technical experts from utilities from the Member States, which may be national or trans-boundary in nature, will undertake day to day implementation and review of specific projects. The Project Teams shall involve the SAPP to facilitate a harmonised approach to project implementation. The Project Teams shall report to Steering Committees (project sponsors) at the national level or trans-boundary in respect of multinational projects e.g. the Westcor and interconnector projects.

- The Steering Committees, whose membership shall be at government officials level, shall constitute the project champions with full accountability for implementation.

- SAPP shall be strengthened to ensure that is has adequate capacity to facilitate the implementation of the Roadmap.

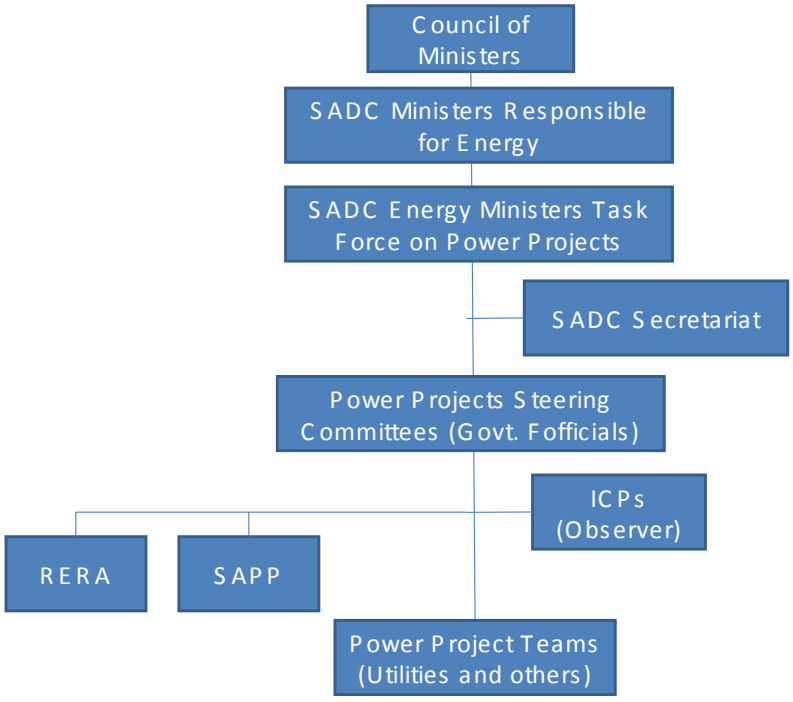
- RERA shall undertake capacity building within the regulatory and institutional framework to ensure that an enabling environment, which is attractive for investment by among others, the private sector, continues to obtain. RERA shall be strengthened to ensure that it has adequate capacity to discharge its responsibilities within the approved framework.

- The two regional institutions within the power sector, SAPP and RERA shall be given additional mandate to champion regional power projects. An institutional audit of SAPP and RERA will be required in order to identify manpower and other requirements necessary for them to take up this task.

- Special Purpose Vehicles (SPVs) such as WESTCOR, should be maintained, but expanded to include representative of SAPP in their Project Teams and Steering Committees.

Where feasible, more SPVs shall be created to facilitate collective implementation of power projects by promoting comparative advantages of the Member States concerned (e.g. the Westcor Project).

The envisaged structure is as depicted below:



The Task Force directed that detailed Terms of References for all the stakeholders within the structure and their modus operandi be developed.

8.0 ……

Annex 11: PIDA-PAP List of Priority Regional Energy Projects

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Project	Country(-ies)	Technology	Capacity/Length	Estimated capital cost	Comments
Mphanda Nkuwa	Mozambique	Hydro	1,500MW	US$ 2.4bn	Feasibility work completed. Shareholding being constituted. PPA discussions with Eskom due to begin in Q1-2014.
Stiegler's Gorge	Tanzania	Hydro	2,100MW	US$ 2.2bn	Need to update feasibility study
Cahora Bassa North Bank	Mozambique	Hydro	1,245MW	US$ 800m	Feasibility work is expected to be carried out by State Grid Corporation of China in collaboration with EdM.
Inga 3	DRC	Hydro	4,320MW	US$ 6bn	Feasibility work is ongoing. IDA recently approved a US$ 73.1m package of technical assistance support.
Grand Inga	DRC	Hydro	39,000MW	US$60-80bn	
Batoka Gorge	Zambia/Zimbabwe	Hydro	1,600MW	US$ 2.8bn	Feasibility studies were carried out in 1993 and are being updated under World Bank CIWA support to ZRA.
Central Africa Interconnector	DRC, Angola, Gabon, Namibia, South Africa	Transmission	3,800 km	US$ 10.5bn	
North South Africa Transmission	Egypt, Sudan, Ethiopia, Kenya, Malawi, Mozambique, Zambia, Zimbabwe, South Africa	Transmission	8,000 km	US$ 6bn	Ethiopia-Kenya and Malawi-Mozambique are receiving active support from the World Bank.

Annex 12: Consistency of Proposed Project with Conditions for IDA Regional Grants

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Condition #1--- Recipient being a bona fide regional organization with legal status and fiduciary capacity to receive grant funding to carry out the activities financed.
The SAPP was created in 1995 through an Inter-Governmental Memorandum of Understanding signed by the Energy Ministers of SADC. Article 7.1.2 of the Constitution of the SAPP Coordination Center gives the Coordination Center explicit authority to receive and implement grants from outside organizations such as IDA.

Condition #2—Recipient does not meet eligibility requirements to take an IDA credit.
SAPP's main current source of income is its members' contributions. In the medium to long term it is expected that the SAPP will have additional income from increased regional electricity trade, but this situation is several years away. Therefore, SAPP's current limited resource base makes it unable to take on an IDA credit.

Condition #3—The costs and benefits of the activity to be financed with an IDA grant are not easily allocated to national programs.
The project is intended to support integration of the Southern African power system in order to promote significant efficiencies and knowledge exchange across the region. Providing neutral support to develop cross-boundary projects requires that project preparation support and funding comes from a non-country specific source. Countries are also very mindful of sovereignty issues regarding their national energy assets and will not necessarily welcome support implemented by a different country.

Condition #4—The activities to be financed with an IDA grant are related to regional infrastructure development, institutional cooperation for economic integration, and/or coordinated interventions to provide regional public goods.
The funding will support the preparation of regional energy projects (generation to be supplied across borders and cross-border transmission) and technical assistance for studies and institutional arrangements that will specifically have a cross-border and regional nature. The PAT will be a regional center of excellence for preparation of regional energy projects.

Condition #5—Grant co-financing for the activity is not readily available from other development partners.
There is a strong intention to leverage financing from other donors to support development of the PAT and broader preparation of regional projects. However, at this time, there is no such support available to SAPP.

Condition #6—The regional entity is associated with an IDA-funded regional operation involving some of the participating member states.

The SAPP have undertaken review and support responsibilities for several existing or planned IDA-funded regional operations including:

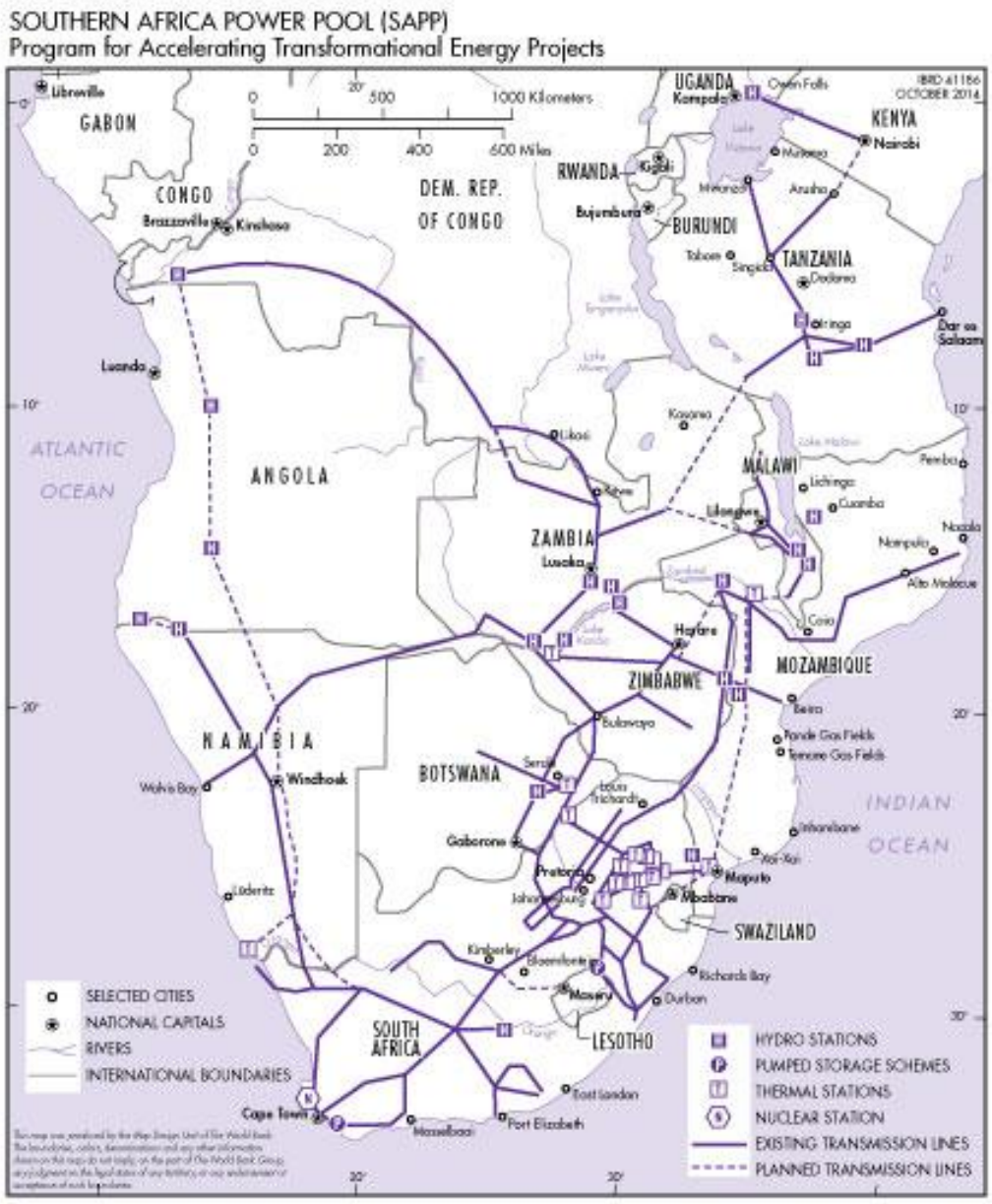
1. Regional Rusumo Falls Hydro-Electric an Multi-Purpose Project (Burundi, Rwanda and Tanzania)
2. Inga 3 Hydro Project (DRC and surrounding Central and Southern Africa Power Pool Countries)
3. Southern Africa Power Market APL 1 (DRC and Zambia)
4. Mozambique Regional Transmission Development Project
5. Batoka Gorge Hydropower Project

Annex 13: Previous and Ongoing Technical Assistance to SAPP

SOUTHERN AFRICAN POWER POOL (SAPP) – Program for Accelerating Transformational Energy Projects

Donor	Period	Issues
European Union	2009-10	EU Capacity Building Programme in support of the SAPP • Strengthening of network operation capacity • Strengthening system planning capacity • Transfer of know-how on European experience in commercial arrangements and trade • Improvement of private sector participation in the context of PPP • Strengthening utility management capacity
Government of Norway and SIDA (NOK 35.25m)	2013-16	• Marginal cost, merit order and bidding strategies • Transmission and ancillary services pricing • Development of a balancing market and overview of market issues • Transmission project packaging and preparation • Generation and transmission projects' peer review exercise
USAID (US$ 2.53m)	2012-14	Capacity Building Program • Impact of renewable energy technologies on SAPP operations • Clean development mechanism (CDM) for energy efficient lighting • Exchange visits for DSM, power markets and transmission pricing in a competitive power market and transmission pricing issues • Training for system controllers
African Development Bank (US$ 2.0m)	2013-16	Preparation of the ZIZABONA transmission project
European Union (EUR 1.2m)	2012-15	• Capacity strengthening for projects preparation and financial closing (5 training sessions for existing staff) • Development and implementation of a balancing market • Design study of a framework for open access to the transmission grid for energy intensive users • Advanced training on transmission planning software • Workshop on the impact of renewable energy technologies on the operations of the interconnecting system • Training of SAPP system controllers • Implementation and improvement of new energy imbalance settlement mechanisms • Finalization of the quality of supply guidelines and monitoring of implementation • Training in developing environmental management plans
Development Bank of Southern Africa (US$ 300,000)	2012-14	• Environmental Impact Assessment for Central Transmission Corridor Project

Annex 14: MAP


SOUTHERN AFRICA POWER POOL (SAPP)
Program for Accelerating Transformational Energy Projects
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GABON
Libreville
CONGO
Brazzaville
Kinshasa
DEM. REP. OF CONGO
UGANDA
Kampala
Owen Falls
KENYA
Nairobi
Mombasa
RWANDA
Kigali
Bujumbura
BURUNDI
Arusha
Moshi
TANZANIA
Dodoma
Iringa
Dar es Salaam
Tabora
Singida
Luanda
ATLANTIC OCEAN
ANGOLA
Kasama
Lake Malawi
MALAWI
Lichinga
Cuamba
Nacala
Nampula
Pemba
Alto Molocue
Lilongwe
Kabwe
Lusaka
ZAMBIA
Chipata
Harare
Lake Kariba
ZIMBABWE
MOZAMBIQUE
Beira
Bulawayo
Pande Gas Fields
Temane Gas Fields
NAMIBIA
Walvis Bay
Windhoek
BOTSWANA
Francistown
Gaborone
Pretoria
Johannesburg
Maputo
Matola
Xai-Xai
Inhambane
INDIAN OCEAN
Ludertz
SWAZILAND
Kimberley
Bloemfontein
Richards Bay
Durban
Maseru
LESOTHO
SOUTH AFRICA
East London
Cape Town
Port Elizabeth
Mossel Bay
SELECTED CITIES
NATIONAL CAPITALS
RIVERS
INTERNATIONAL BOUNDARIES
HYDRO STATIONS
PUMPED STORAGE SCHEMES
THERMAL STATIONS
NUCLEAR STATION
EXISTING TRANSMISSION LINES
PLANNED TRANSMISSION LINES