



EAGLESTONE
ADVISORY



4th Mozambique Mining, Oil & Gas and energy Conference Exhibition

Policy and Partnerships to develop the Power Sector, incentives for new energy investors

January 2014



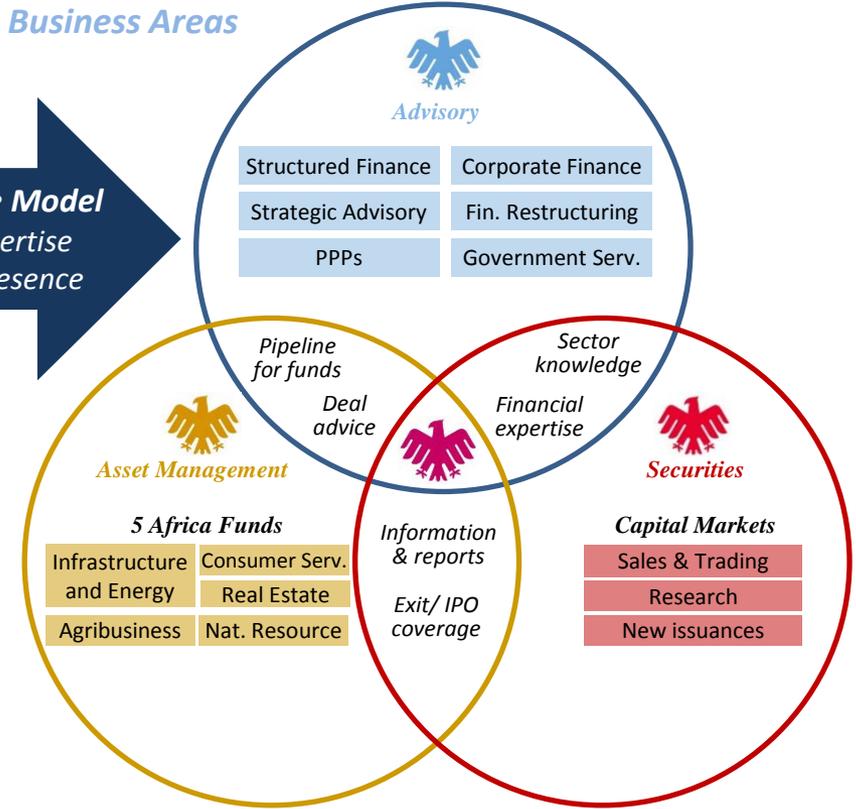
Eaglestone

- Local presence in high growth underpenetrated markets
- Cross fertilization among business areas
- Adherence to international regulatory standards

Geographic Scope and Local Presence



Business Areas



Investors Incentive: Southern Africa Power Pool

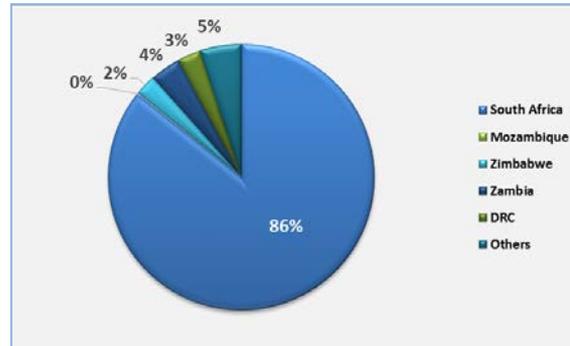
Context

- ❖ The Aim of the SAPP creation was to optimise the use of available energy resources in the Southern African countries and support one another during emergencies
- ❖ Members of the SAPP have undertaken to create a common market for electricity in the SADC region and to let their customers benefit from the advantages associated with this market

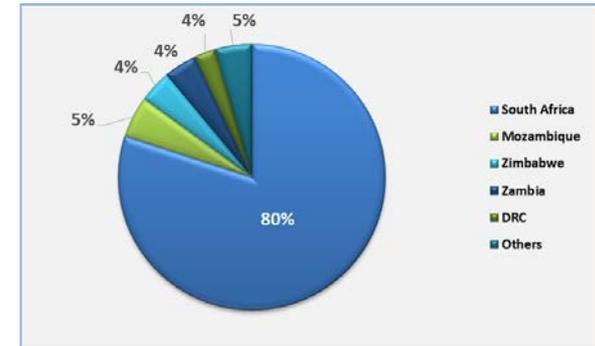
Fast Facts

■ Number of Countries	12
■ Million of People	250
■ Installed Capacity	57 GW
■ Available Capacity	52 GW
■ Peak Demand	54 GW
■ Total Consumption	400 TWh p.a.
■ Avg Electricity growth rate	2.5% p.a.
■ Hydropower Share	20%
■ Thermal Share	75%
■ kW per capita	0.23
■ kwh p.a. per capita	1600

Consumption Per Country (2010)



Generation Contribution (2013)



Source: SAPP-2010 & 2013

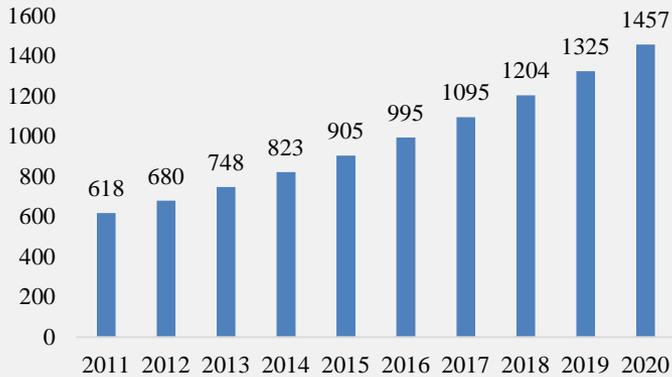
- ❖ A recent Pool Plan Study (*) shows that **56,687 MW** of new additional power generation capacity would be required by 2025 at a cost of USD **48 billion** (no nuclear committed)
- ❖ If all planned hydropower projects are implemented, SAPP plans to increase hydropower contribution from current **20%** to **26%** by 2025

(*) Source: SAPP IRENA Presentation - 2013

Investors Incentive: Energy Sector - Country and SADC Energy Demand

Demand Forecast

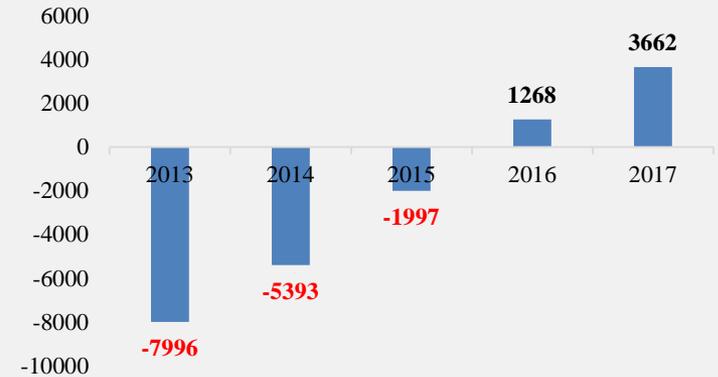
Mozambique Energy Demand Forecast (MW)



SADC Capacity Shortfall & Projected Surplus

Situation in 2013

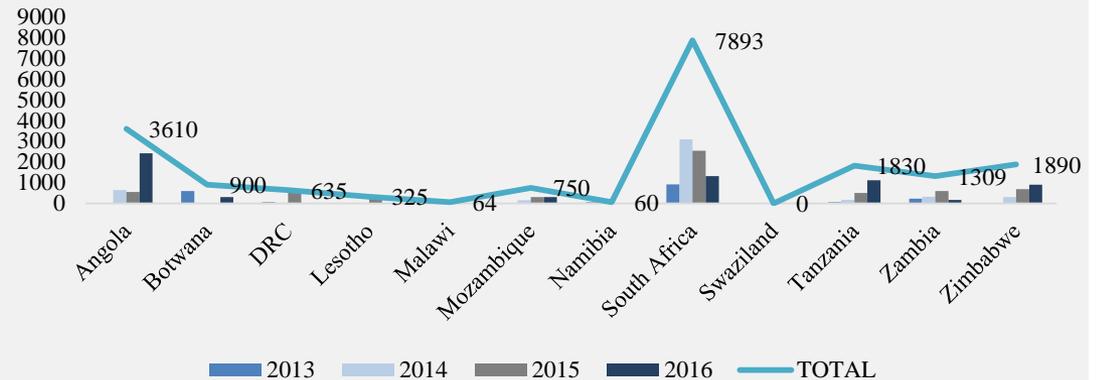
- 12 Countries
- 280 Million people
- Installed Generation Capacity – 56 GW
- Available Generation Capacity – 51 GW
- Peak Demand – 54 GW



Main Reasons

- The energy has a leading role in the development of mining activities. Many of the mining projects under development could substantially improve their viability through the delivery of electricity from the National Power Transmission Grid, provided it achieves greater reliability, safety and affordable cost compared to alternative sources currently used

SADC - Projects Identified to Address the Challenges (MW)



Investors Incentive

Market Opportunity

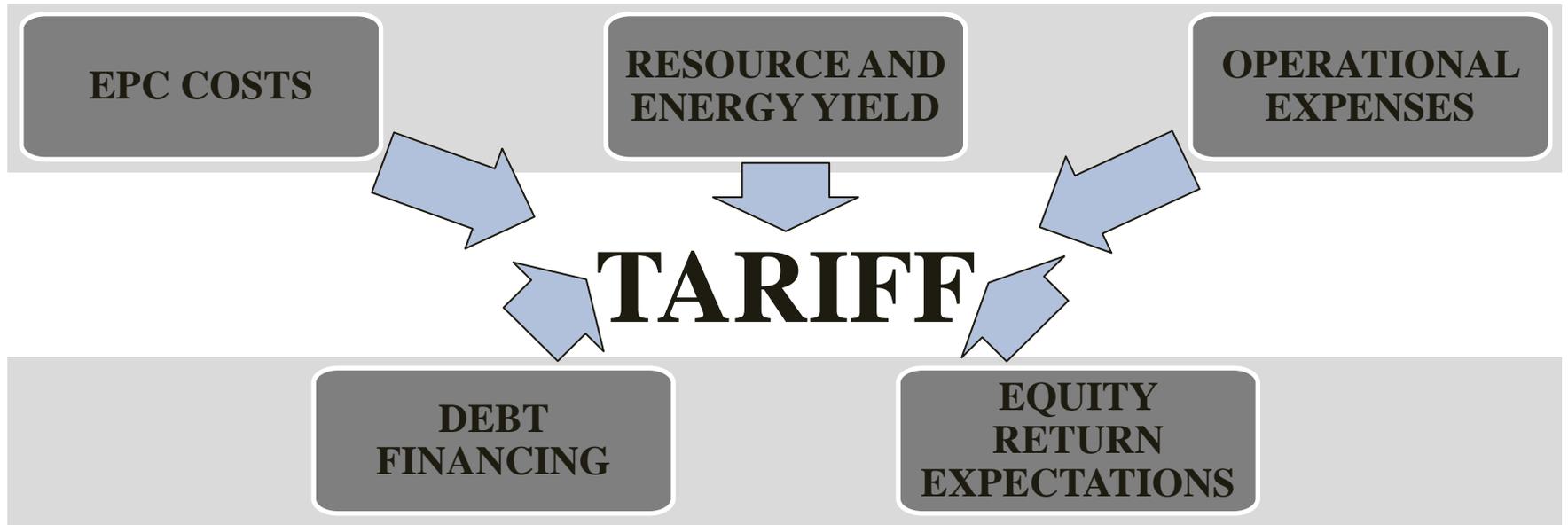
- ❖ **SADC Region as 300 Million People and Mozambique 24,3 Million;**
- ❖ **SADC Region Estimated additional generation needs up to 2025 of 57.000 MW;**
- ❖ **Mozambique estimated needs up to 2025 of up to 4.000 MW;**
- ❖ **Mozambique as under development approximately 16.000 MW across all technologies; such as hydro, gas fired, coal and renewable (wind, solar, PH) projects;**
- ❖ The challenge is to create an environment to overcome proper Project Size and cost; additional Transmission; Financial constraints of national utilities; Environmental and social obstacles; Cross-border deals;
- ❖ The **goal** is for **Mozambique to transform its energy** generation capacity in a **exportable commodities** to the SADC region and use the Southern Africa Power Poll (SAPP);

Investors Incentive

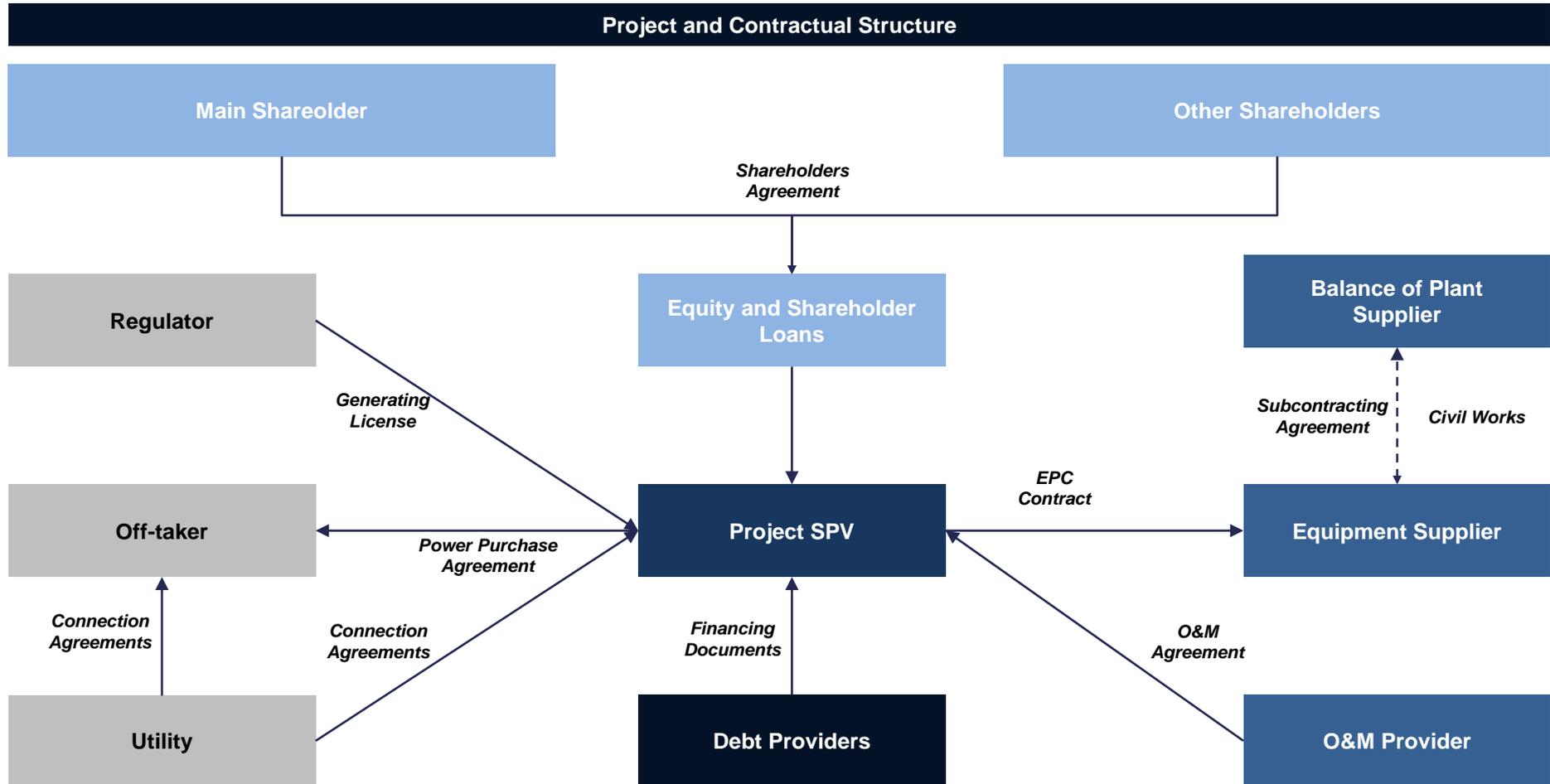
General Incentives

- ❖ **Politically stable** country with **growing economy at 7-8%** per year for the next 10 years;
- ❖ Mozambique has **investor-friendly business environment**;
- ❖ **Decreasing dependence from international donors** and external financing, as fiscal revenues and internal financing progressively increase and contribute to Mozambique becoming increasingly self-sufficient;
- ❖ The government's **Investment Promotion Centre (CPI)** as the investor's primary contact regarding Direct Investment and certain **tax and customs benefits** depending on the amount, location and sector of investment activity;

Funding Structures



Funding Structures



Funding Structures: Base Project Fiance

- **Type:** project finance: non-recourse / limited recourse basis
- **Debt to Equity ratio:** up to 75 : 25
- **Term:** depending of offtake agreements (normally 15-20 years)
- **DSCR:** 1,30x to 1,50x
- **Senior Debt Pricing:** margins ranging from 500 to 700 bps (depending on several aspects such as country risk; project quality; off taker and others)
- **Construction and O&M:** EPC turnkey agreement with a reliable counterparty including O&M tasks for an initial period of 5 years from COD and standard guarantees usually seen (availability, power curve, serial defects).

Funding Structures: Base Project Finance

- **Shareholders Return:** minimum expected IRR in the region of 15% - 25%

(*) depending on a number of several inputs such as:

- Currency
- Volume of capex per MW
- Energy price assumptions
- Volumes of annual production
- O&M costs
- Taxes

- **Key Issue:** FLEXIBILITY from both sponsors and lenders in order to agree and find the best possible / well balanced structure

Main Sources of Funding

- ❖ **Equity Funding (Shareholders)**
- ❖ **Senior Debt (Commercial Banks / Multilaterals / Capital Markets)**
- ❖ **Subordinated Debt / Mezzanine Finance**
- ❖ **Subsidises / Incentives**

Risk Mitigation

Key Instruments

Technical

Turnkey EPC Contract, O&M Agreement

Commercial

Pass-through, back to back arrangements

Political

ECA/MCA/private insurance

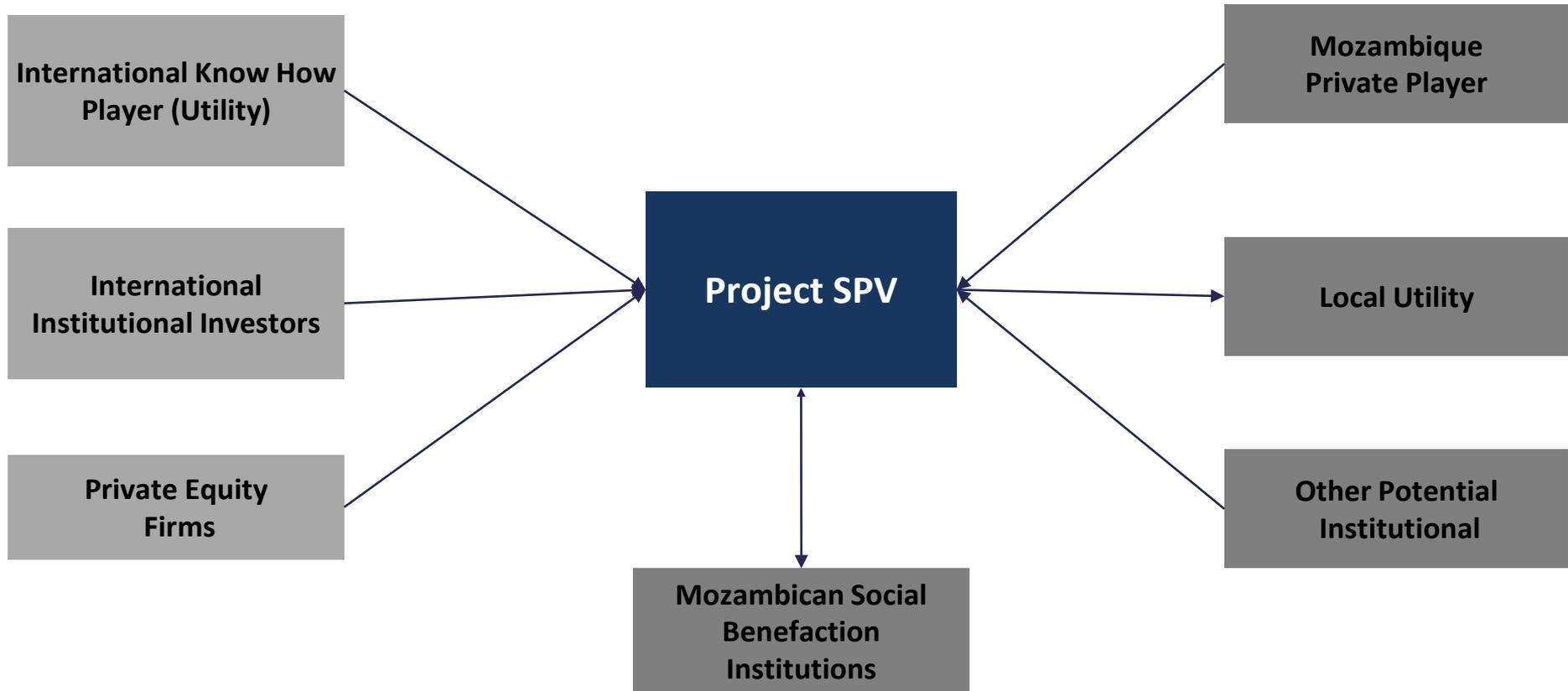
Financial

Hedging if available

HILP

Insurance

Partnerships



Case Study

- ❖ **Deal Size:** USD 594m,
- ❖ **PPA Term:** 20 Years
- ❖ **Off Take:** Eskom
- ❖ **Net Gearing:** 75:25
- ❖ **Funding Structure:** Project Finance
- ❖ **Tenor:** 18,5 years
- ❖ **Debt:** Senior and Mezzanine Finance



Key Challenges and Risks for the Sector

❖ EDM capability to monitor the sector growth:

- Difficulty in securing Purchase Power Agreements (PPA) or tariff subsidies, given its financial strength and "bankability"
- Strategy and prioritization of various projects under development and the ability to finance and manage the investments concerning to the rights of participation in projects

❖ Feasibility of the model for export:

- Infrastructural inadequacies require greater investment and coordinated development of several projects
- Complexity of export agreements with utilities in other countries of the region

❖ Amount of competing projects in development:

- The market can not absorb all the projects, being critical not to delay in the development process
- The first projects to ensure development, may achieve more favourable trading conditions

Key Challenges and Risks for the Sector

❖ Raising capital:

- Projects have high needs for equity in both capital development and construction
- Capacity of the project to attract national and international investors can reduce capital costs

❖ Bank financing:

- The shortage of liquidity of the domestic banking system, creates the need for commercial banks in South Africa, bilateral agencies or multilateral development banks
- **Contractual complexity:** commercial and financial negotiations involving multiple stakeholders and multiple contracts (eg PPA, EPC, O & M supply, financing, guarantees, etc.) make the lengthy and complex process, increasing the challenge of implementing and funding