FINANCING INFRASTRUCTURE IN AFRICA:
Breaking the Barriers to Sustainable Development

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Agenda

- Introduction
- Breaking the Barriers to Sustainable Investment
- Conclusions & Recommendations
- Leveraging on Experience
Physical Infrastructure projects are ‘those services without which primary, secondary, and tertiary production activities cannot function’ Specifically capital-intensive facilities in:

- Electric power (generation and distribution)
- Energy (refineries, pipelines, processing facilities, etc.)
- Telecommunications
- Transportation (toll roads, ports, railways, etc.)
- Water / Sewer

The Input – technology, capital equipment, expertise are sourced mainly in the international markets and typically financed in international currencies.

The output (e.g., electricity, petroleum products) is sold primarily in the domestic market and paid for in local currency.

The Debt/Bonds used to finance these projects are therefore exposed to 2 main risks:

- Devaluation – Reduction of USD value of cashflows below debt service levels.
- Convertibility – Risks that local authorities may block the exchange of local currency revenues into dollars or block currency transfers from the host country.
The Infrastructure Situation at a Glance

- **Infrastructure investment** – a 15-25+year proposition that requires insight & foresight!
  - **Governments** – adopting concessions/greenfield projects, PPPs vs. asset privatisations

- **Sector Trends**
  - **Telecommunications**: strong cashflow from cellular services. Currently Private sector driven
  - **Power**: Poor cashflows due to sub-economic tariffs and under-investment
    - Historically, cross-subsidised to benefit small residential consumers, implying politically difficult adjustment process to generate sustainable cashflows.
    - Private sector involvement without govt capacity support may be limited to independent power producer (IPP) projects servicing large customers (industrials, distributors, etc.)
  - **Transport**:
    - airports and shipping ports generate strong cashflow today.
    - roads and rail networks generate limited revenues and may need govt transfers (shadow tolling).
  - **Water and Sewerage**: limited cashflow in emerging markets - viewed as the ultimate “public good”.
Funding Options – Capacity Estimates (per annum)

**Rationale**

<table>
<thead>
<tr>
<th>Financing Capacity</th>
<th>US$ m, 2011</th>
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<tbody>
<tr>
<td><strong>International Banks</strong></td>
<td>US$750-US$1500</td>
</tr>
<tr>
<td><strong>Local Banks</strong></td>
<td>US$300-US$400</td>
</tr>
<tr>
<td><strong>DFIs</strong></td>
<td>US$500-US$750</td>
</tr>
<tr>
<td><strong>ECAs</strong></td>
<td>US$750-US$1500</td>
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**Total:** US$2.5bn-US$4.15bn
## Financing of the Power Sector

- **Crucial to select financing to match Phase of the development of sector**
- **Different sources of liquidity have different risk appetites and return requirements**
- **Standard Chartered has the requisite knowledge of the financing sources and capacity to advise on financing early on in the sector development**

### Pre-requisites to financeability

<table>
<thead>
<tr>
<th>Funding sources</th>
<th>Phase 1</th>
<th>Phase 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>ECAs</td>
<td>Financing linked to exporters</td>
<td>Track record of cash flows within sector to support debt financing as well as a reasonable risk-adjusted return on equity investment</td>
</tr>
<tr>
<td>DFI</td>
<td>Available for refurbishment, expansion and new builds</td>
<td>Creditworthy private owners who have a track record of power project development and operations</td>
</tr>
<tr>
<td>Commercial Banks</td>
<td>Non-recourse project financing available subject to reforms in sector</td>
<td>Significant liquidity available for infrastructure projects in Sub-Saharan Africa and Nigeria</td>
</tr>
<tr>
<td>Bonds</td>
<td>Financing in conjunction with ECAs and DFI</td>
<td></td>
</tr>
<tr>
<td>Equity</td>
<td>International and local investment from private sector</td>
<td></td>
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</table>

### Transformation Phases

- **Straightforward sector reforms with sufficient credit support in the near to medium terms**
  - PPA with cost reflective tariff and reasonable credit support through PRG structure and FGN guarantees
  - Secure fuel supply and associated fuel supply agreements ensuring ability of power projects to provide baseload generation
  - Creditworthy private owners who have a track record of power project development and operations
  - Track record of cash flows within sector to support debt financing as well as a reasonable risk-adjusted return on equity investment

- **Phase 1**
  - Significant liquidity available for infrastructure projects in Sub-Saharan Africa and Nigeria

- **Phase 2**
  - Non-recourse project financing available subject to reforms in sector
  - Financing in conjunction with ECAs and DFI
  - Project bond - 5 to 12 years
  - Pension funds
  - IPO / international or local listing
Emerging Markets IPP Precedents

- Financings made possible despite continuing issues
  - Demand-Supply Equations
  - Lack of creditworthiness of offtakers
  - Ability of consumers to pay full tariffs
  - Political Risks
  - Pending Sector and Tariff Reforms & changing regulatory systems
  - Legal enforceability
  - Currency: Depreciation, Convertibility and Transferability

- Issues are universal; however, situations can be unique

- Regional comparisons:
  - Africa at the forefront of IPP initiative – Vridi IPP in 1995
  - Middle East markets extremely “hot” since 2003 and continue to grow
  - Slow-down in IPP activity in Africa, although resources sector increasingly active

Leverage from Precedents: Don’t replicate but learn from experiences in other emerging markets
Breaking the Barriers to Sustainable Investment
<table>
<thead>
<tr>
<th>CASHFLOW</th>
<th>FINANCING</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tariffs / Fees / Tolls and</td>
<td>Equity and Management</td>
</tr>
<tr>
<td>Government Supplements (MYTO?)</td>
<td></td>
</tr>
<tr>
<td>Regulatory Framework</td>
<td>Bank Debt (Loans) and Capital Markets Debts</td>
</tr>
<tr>
<td>and Macro Stability</td>
<td>(Bonds)</td>
</tr>
<tr>
<td></td>
<td>Credit enhancements possible?</td>
</tr>
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</table>

Result: many potentially viable projects not attracting finance
Barriers to Sustainable Infrastructure Development

- Macro & Regional Barriers
  - The prevalence of inefficient monopoly providers (state owned)
  - Scarcity of investment spend because prices have been held below cost
  - Inadequate local expertise to structure long term Project financing
  - Lack of depth and defined yield curves in local debt and capital markets
  - Absence of incentive mechanism (fiscal tax etc) to encourage infrastructure financing

- Governance and Management Barriers
  - Public Sector as equity holder is problematic. (often essential to get other parties involved)
  - May not be incentivised to appoint appropriate concession holder due to political considerations
  - Domestic concession holder may not have right management experience for difficult initial stages of the project
  - May undertake project location and or management decisions on political considerations
  - Increase perceived commercial risks for debt finance
  - Sovereign and Cross-Border risks
What is required to achieve sustainable development?

- Sponsors: Local parties to improve credit worthiness, corporate governance and management capacity
- Banks: Innovative structures to project, corporate, and sovereign financings, with the aim of improving credit ratings for transactions:
  - Structures to mitigate the risk of devaluation, and
  - Structure to facilitate the use of local debt and capital markets, which can provide financing denominated in the currency in which the project earns its revenues
  - Structure to breach the sovereign ceiling, which therefore permit the transaction’s (global scale) local currency rating to become its foreign currency rating
- Governments: Strong institutional framework for protecting creditors rights and improved access to legal enforcement and remedy
- Development Finance Institutions and ECAs:
  - Country risk mitigation instruments (PRI & Gtees)
  - Deepen depth of Africa capital markets (Credit enhancement for Debts & Bonds, risk participations etc)

Need for diversification of funding sources (Equity, Debt & Capital Markets) and mobilisation of long term investment from local and international markets
The Art of the Possible - Africa

- Homework is key
  - Generation Mix: existing capacity, existing IPPs, New IPPs
  - Comprehensive policy for greenfield IPPs and privatisations
  - Sector-wide Payment security mechanism and Nature of Sovereign Support
  - Enabling Legislation, Permits and Approvals
  - Ensure sector and tariff reforms lead to reduced reliance on payment support mechanisms
  - Tie-in with Distribution Privatisation

- Process & Packaging
  - Engage Advisors
  - Investor and Lender Roadshows
  - Comprehensive RFP Package
  - Adherence to timeframe and deadlines
  - Transparency

- Don’t expect too much from the very first deal
  - Need to attract international investors and lenders
  - Progressive shift in risk allocation
Emerging markets have huge scope for value creating investment in infrastructure

- But most emerging markets do not have sufficient tax and government revenues for pure public sector funding

Funding is not the critical barrier

- Project finance remains available for well structured projects
- Credit markets have become used to dealing with currency and political risks, for bankable projects

Revenue is not generally the critical barrier

- Governments in Africa have started the broad policies and regulatory changes to support stable revenue streams
- There are greater challenges associated with revenue transfer arrangements e.g. in water & sewerage, roads

A key management and institutional gap remains. This can be overcome by greater involvement of private equity and debt in financing of infrastructure
Power: Emerging Markets IPP Precedents

- Vridi, Cote d’Ivoire (1995)
- Iberafrica (Nairobi South), Kenya (1997)
- GTI Dakar, Senegal (1998)
- IPTL, Tanzania (1998)
- Taweelah A2, Abu Dhabi (1999)
- Dabhol, India (1999)
- Tsavo Power (Kipevu II), Kenya (1999)
- Takoradi, Ghana (1999)
- Azito, Cote d’Ivoire (1999)
- Al Kamil, Oman (2000)
- Barka 1, Oman (2000)
- Taweelah A1, Abu Dhabi (2000)
- Haripur, Bangladesh (2001)
- AES Ebute Barge, Nigeria (2001)
- Songas, Tanzania (2001)
- Shuweihat, Abu Dhabi (2001)
- Kelvin, South Africa (2001)
- Ras Laffan 1, Qatar (2002)
- Meghnaghat, Bangladesh (2002)
- Salalah, Oman (2002)
- Limbe (AES Sonel), Cameroon (2003)

- Sadaf, Saudi Arabia (2003)
- Umm al Nar, Abu Dhabi (2003)
- Al Ezzel, Bahrain (2004)
- Ras Laffan B (2005)
- Taweelah B, Abu Dhabi (2005)
- Shuaibah, Saudi Arabia (2005/6)
- Rabigh, Saudi Arabia (2006)
- Al Hidd, Bahrain (2006)
- Fujeirah, UAE (2007)
- Shuqaiq, Saudi Arabia (2007)
- Marafiq, Saudi Arabia (2007)
- Messaieed, Qatar (2007)
- Ewekoro _ WAPCO IPP (2005)
- Bujagali Hydro, Uganda (2007)
- Rabai, Kenya (2007)
- Ibom IPP, Nigeria (2008)
- Geometric Power Aba (2008)
- DME IPPs, South Africa (2008?)
- KuduPower, Namibia
- Morupule, Botswana
- Mm’amabula, Botswana
- Ras Azzour, Saudi Arabia (2007)
How Can We Help?

- Privatisation Advisory
  - Sector Strategy
  - Risk Allocation
  - RFP Preparation and Packaging
  - Roadshows in Europe, Middle East and Asia
  - Bid Evaluation, Negotiation and Selection
  - Monitoring Financial Close

- Buy-side Advisory
  - Financial Modeling & Evaluation
  - Structuring multi-sourced and multi-phase financing plan
  - Managing Due Diligence Process
  - Risk Allocation and Project Agreements review / mark up
  - Preparation of Proposal
  - Negotiations with Offtakers and Financiers

- Project Finance: Underwriting, Lead Arranging and Financial Close
  - Financial Advisory & Structuring
  - Commercial Debt, Export Credits, B Loans, Debt Capital Markets
What is the Best role of the Public Sector?

- The Public sector is NOT equipped to build, own, operate and manage infrastructure assets.

- Creating the transparent legal foundation and regulatory frameworks that stimulate sustained private investment flows (“Rules of the Game”)
  - Strategic incentives and credible investment signals
  - Fair, risk-adjusted remuneration/market pricing
  - Fair, enforced penalties for non-performance
  - Offsets for risks on handled readily by private sector
  - Capacity payments or tax incentives to ensure breakeven on low cashflow projects

Solution

- A shift to a hybrid financing model involving a combination of the relevant parties:
  - Government
  - Donors and Multilateral agencies
  - Private Sector (domestic and foreign investors)
  - Consumers

The challenge is alignment of the various stakeholder (Governments, Investors, Providers of Finance & Consumers) interest through the project life cycle
Power & Infrastructure Credentials
Notable Deals

**IBOM IPP** (Nigeria)
Independent Power Plant
Mandated Lead Arranger & Modelling Bank
Ongoing

**Aga Khan Foundation**
Sithe
Bujagali Hydro (Uganda)
Project Financing
Mandated Lead Arranger
Ongoing

**AES**
AES Ebute (Nigeria)
Independent Power Plant
Off-take Credit Support Provider
Arranger
Ongoing

**INTERGEN**
Energia Azteca x Energia de Baja California (Mexico)
USD 804 M
Project financing for a 1,060 MW natural gas power plant
On-going

**TATA**
Itezhi-Tezhi IPP (Zambia)
Project Financing of IPP
Financial Adviser
Ongoing

**INDONESIA POWER**
PT Indonesia Power (Indonesia)
USD 55 M
SBLC for Gas Purchase
Lead Arranger
Ongoing

**ACWA Power**
Empresa Electrica Ventanas (Chile)
USD 440 M
Project financing for a 242 MW greenfield coal-fired plant
Arranger & Documentation Agent
2007

**Tractebel**
Marrafiq IWPP (Saudi Arabia)
US$ 3,300 M
Project Financing
Mandated Lead Arranger
2007
Power & Infrastructure Credentials

Notable Deals

- **Shuqaq IWPP (Saudi Arabia)**
  - USD 1,400 M Project Financing
  - Mandated Lead Arranger
  - 2007

- **AES Sonel (Cameroon)**
  - Capex Programme Financing
  - Security Trustee & Facility Agent for IFC, Proparco, EIB, AfDB, DEG & FMO
  - 2006

- **Fujairah IWPP (UAE)**
  - USD 1,500 M Project Financing
  - Mandated Lead Arranger and Hedging Bank
  - 2006

- **Al-Hidd IPP (Bahrain)**
  - Project Financing
  - Mandated Lead Arranger
  - 2006

- **Nam Theun 2 Hydropower Project (Laos)**
  - US$ 1,581 M Project Financing
  - Mandated Lead Arranger and Hedging Bank
  - 2005

- **Shuaibah IWPP (Saudi Arabia)**
  - US$ 2,542 M Project Financing
  - Mandated Lead Arranger
  - 2006

- **Taweelah A-1 10 (Abu Dhabi)**
  - USD 1,100 M Project Financing
  - Mandated Lead Arranger
  - 2005

- **Taweelah B IWPP (Abu Dhabi)**
  - US$ 2,670 M Project Financing
  - Mandated Lead Arranger
  - Structuring Bank, Insurance Bank
  - Documentation Bank, Joint Bookrunner, JBIC Co-ordinator, Hedge provider
  - 2005
Regional Infrastructure Deals (I)

Sohar Power (Oman)
USD 446M
Project Re-Financing
Bookrunner and Mandated Lead Arranger
Standard Chartered

Port Said East Power (Egypt)
USD 302M
Project Financing
Mandated Lead Arranger
Standard Chartered

Suez Gulf Power (Egypt)
USD 296M
Project Financing
Mandated Lead Arranger
Standard Chartered

Mesaieed IWPP (Qatar)
USD 2.2 bn
Project Financing
Mandated Lead Arranger
Standard Chartered

Mandated Lead Arranger

Sohar Power Company SACC

Port Said East Power (Egypt)
USD 302M
Project Financing
Mandated Lead Arranger
Standard Chartered

Suez Gulf Power (Egypt)
USD 296M
Project Financing
Mandated Lead Arranger
Standard Chartered

Dolareh Container Terminal (Djibouti)
USD 300M
Islamic Project Financing
Financial Advisor, Mandated Lead Arranger
Standard Chartered

Emirates Cement Company (U.A.E.)
USD 290M
Project Financing
Mandated Lead Arranger
Standard Chartered
ADWEA Sewage Treatment Plant (U.A.E)
Confidential Project Financing
Financial Advisor
Standard Chartered

Disi-Mudawwara Water Conveyance Pipeline (Jordan)
USD 1,000M Project Financing
Financial Advisor
Standard Chartered

Shuqaiq IWPP (Saudi Arabia)
USD 2.0B Project Financing
Financial Advisor
Standard Chartered

Marafiq IWPP (Saudi Arabia)
USD 2.2B Project Financing
Financial Advisor
Standard Chartered

Shuaibah IWPP (Saudi Arabia)
USD 1.9B Project Financing
Financial Adviser
Mandated Lead Arranger
Standard Chartered

Taweelah-B (U.A.E)
USD 2,056M Project Financing
Pre-bid Underwriter and Mandated Lead Arranger
Standard Chartered

Rousch Power (Pakistan)
USD 328M Interest Rate Swaps
Structuring & Hedging Bank
Standard Chartered

Al Ezzel Power (Bahrain)
USD 372M Project Financing
Mandated Lead Arranger
Standard Chartered
Regional Infrastructure Deals (III)

- **Tihama Power** (Saudi Arabia)
  - USD 510M
  - Project Financing
  - Lead Arranger
    - Standard Chartered

- **Sohar IWPP** (Oman)
  - USD 414M
  - Project Financing
  - Pre-bid Underwriter and Mandated Lead Arranger
    - Standard Chartered

- **National District Cooling** (U.A.E)
  - AED 700M
  - Project Financing
  - Lead Arranger
    - Standard Chartered

- **Umm-Al-Naar IWPP** (U.A.E)
  - USD 855M
  - Project Financing
  - Mandated Lead Arranger
    - Standard Chartered

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- **Ministry of Finance Ghana**
  - Re: Korle Lagoon Ecological Restoration Project (Ghana)
  - USD 37 million
  - ECA Buyer Credit Facility
  - Sole Arranger/Lender
    - Standard Chartered
    - 2003

- **Ministry of Finance Ghana**
  - Re: Korle Lagoon Ecological Restoration Project (Ghana)
  - USD 37 million
  - ECA Buyer Credit Facility
  - Sole Arranger/Lender
    - Standard Chartered
    - 2003

- **Ghana Telecom** (Ghana)
  - USD 30 Million
  - ECA Facility
  - Mandated Lead Arranger & Sole Lender
    - Standard Chartered
    - 2005

- **Thuraya Satellite** (U.A.E)
  - Project Financing
  - Financial Advisor
    - Standard Chartered