



AFRICAN DEVELOPMENT BANK GROUP

Implementing Renewable Energy Projects in sub-Saharan Africa

Challenges and Successes of Lake Turkana Wind Power Project

2015 ICA ANNUAL MEETING

Abidjan, Cote d'Ivoire



Aldwych Overview



- Formed in 2004 to develop and invest in power businesses in sub-Saharan Africa
- Founders had previously worked in power in Africa since 1996, in generation, transmission and distribution
- Activity so far mainly in Zambia, South Africa, Kenya, Tanzania, Ghana & Nigeria. Projects in development in Chad, South Sudan and The Gambia, among others
- Investors: Pan-African Infrastructure Development Fund, FMO, Emerging Africa Infrastructure Fund, as well as management
- Founder member of Power Africa Initiative
- Development partnership with InfraCo Africa

Aldwych Key Projects



- 360MW Kelvin coal fired power plant in RSA – operator and owner
- 90MW Rabai HFO fired plant in Kenya – developer, operator and owner
- 310MW LTWP wind project in Kenya – developer, operator and owner
- 100MW Singida wind farm in Tanzania – developer, operator and owner
- 360MW Ruhudji hydropower project in Tanzania – developer, owner and operator
- 190MW Amandi gas/oil fired plant in Ghana – developer, owner & operator
- 450MW Azura gas fired plant in Nigeria – developer, operator & owner



Lake Turkana Wind Project

- 310MW wind farm, located in northern Kenya
- 365 Vestas V52 (850 kW) wind turbines, overhead electric grid connection system and high-voltage sub-station
- Upgrading of 204km of existing road and construction of new access road and village
- Double circuit 400kV, 428 km transmission line (financed by Spanish and Kenyan government funds) to connect to national grid
- In development since 2006 by original sponsors, KP&P
- 20-year energy-only PPA with KPLC, Government letter of support backing KPLC's obligations
- Total project cost €622 million: the largest single private investment in Kenya to date
- Mandated lead debt arrangers: African Development Bank, Nedbank and Standard Bank
- PRG: African Development Bank; breach of contract insurance: ATI
- Financial Close December 2014, first power Q3 2016

Funding Structure



Senior	Sources	
Tranche A AfDB	€115m	
Tranche 'B' ECA Facility Covered	€ 20m	
Tranche 'B' ECA Facility Uncovered	€100m	
EIB Senior Loan 'A'	€50m	
EIB Senior Loan 'B'	€50m	
Tranche 'C' DFI Facilities FMO €35, Proparco €20, ICCF €30m, PTA Bank, €10 & Tridos €6m	€101m	Senior € 435m
Mezzanine Finance		
Subordinated debt DEG €20m, EADB €5m, PTA €10m & AfDB €2m	€37m	
ITF preference share	€25m	Mezzanine €62m
Equity		
Aldwych	€38m	
KP&P	€31m	
IFU	€7.5m	
Norfund	€16m	
Finnfund	€16m	
Vestas	€16m	
Sandpiper	€0.5m	Equity €125m Total €622m

Some of the Challenges

- Very large projects, renewable or conventional, in sub-Saharan Africa need many lenders: in truth, financing renewable projects little different from non-renewables
- Long lead-times (typically 7-8 years to reach financial close)
- Inexperience of many well-meaning developers
- Procurement
- Distance from “civilisation”: how to maintain oversight
- Developer balance sheets
- Robustness of credit support for off-taker
- Transmission line matters
- Community relations and impacts of project on vulnerable people
- Grid integration
- BUT, now ~12% complete and slightly ahead of budget

Village



Turbine Foundation



And Finally, The Six Golden Rules*



- ❑ 1. Follow the money
 - ❑ Know who is buying and if/how/when they will pay
- ❑ 2. Care for your project
 - ❑ Never let it out of your hands, even the bits you don't like/understand
- ❑ 3. Ask all the hard questions
 - ❑ Even if you don't like the answers; if you don't ask often and early they will come back to bite you later
- ❑ 4. Go fast
 - ❑ Delays cost money: higher development costs and lower returns
- ❑ 5. Do everything in parallel
 - ❑ Things left till later mean other things may have to be redone
- ❑ 6. Governments do not behave like businesses
 - ❑ Civil servants are not paid to be entrepreneurs