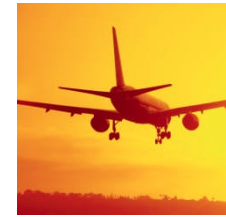
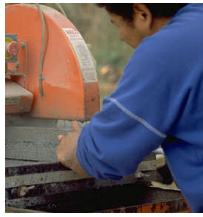


**Delphos
International**

CCA Infrastructure Conference
Workshop on Private Investment in Power Projects



ssgatchev@delphosinternational.com

Tel. (202) 337-6300

Fax. (202) 333-1158

www.delphosinternational.com

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Mmamabula Project

- Live project under development in eastern Botswana
- Illustrates challenges of cross-border IPPs in today's EPC and financing markets
- Initial configuration:
 - 3 X 835 MW (net), baseload plant supercritical aircooled coal-fired technology
 - Dedicated greenfield mine
 - EPC contractor: Siemens/Doosan Babcock
 - Sponsors: CIC Energy (Canada), International Power (UK)
 - Off-takers: Eskom (75%), BPC (25%) under 40-year ZAR PPAs
 - Total cost: USD 13.2 bn (80% debt, 20% equity)
 - Lenders: TBD (JBIC, RSA commercial banks, AfDB, IFC, IBRD, ECAs)
- Delphos Intl. is advising the Government of Botswana in part through the assistance of USAID and USTDA
 - Assistance with respect to Mmamabula, 250 MW coal bed methane project, and 80 MW interim/rental power project
 - Consortium includes Hunton & Williams and London Economics



Project History

- Severe power shortages in Southern Africa after years of high demand growth and underinvestment
- Current “load shedding” in the region as Eskom curtails “firm” supply arrangements in the face of domestic cuts
- Shortages expected to persist until late in the following decade
- Eskom’s own build program facing delays and cost increases
- Botswana pursuing domestic supply alternatives such utility build and IPP coal and coal bed methane projects
- Large, proven coal field in Botswana (Mmamabula)
- CIC granted an exploration license following an unsolicited bid
- Attracts IPR as a co-investor and operator



Project History (cont.)

- Off-takers demand COD by Q1 2013, which requires a financial close in the first half of 2009
- Dramatic EPC price increases in 2008
- Availability of turbine slots on the critical path. Siemens demanded a commitment payment in June and a reservation agreement in August. Worth tens of millions of Euro.
- Sponsors unwilling to enter into expensive reservation agreement before they have PPA term sheets in place
- Eskom unwilling to pay Siemens commitment fee given bid-ask spread with sponsors on tariff and risk allocation
- Project needs to be restructured to address these issues



Financing Plan

- Capital structure => 80% debt / 20% equity
- ZAR financing. Matches the denomination of the PPAs.
- Size of financing unprecedented for an IPP in the region and globally. Insufficient liquidity in ZAR.
- JBIC participation predicated on Sumitomo acquiring a stake in the project. JBIC to guarantee a banking or a capital markets tranche.
- Direct lending from RSA banks and MDBs
- Large ECA component
- Partial risk guarantees pursued through the World Bank. May extend tenors and reduce all-in costs
- Tenors: 18-20 years, 25 years for JBIC (if matched)



Cross-border Issues

- RSA regulatory approval. Potential disincentives from perspective of importing utility (Eskom).
- New 3-circuit transmission lines
 - Who builds and maintains?
 - Who pays for it and how?
 - Who has rights over unused capacity?
- Operating area control
 - Should the project be “islanded”?
 - BPC exposure in case of dispatch issue, inadvertent flows, etc.
- What happens if one or both buyers default under PPA?
- Force majeure issues affecting one or both countries
- Ownership split following buyout transfer by utilities



EPC Issues

- Absolute cost increases (from USD 1,600/kW to 2,600 USD/kW) and steeper payment curve
 - Result: higher tariffs (increased by almost a third between Nov and Feb)
- Escalation clauses (indices and “open book”/cost plus)
 - Need for large contingencies, contingent equity, higher tariffs
- Split of civil and electro-mechanical components (no “wrap”)
 - Higher complexity, potential delays and finger pointing (interface risk) between contractors, foundation risk
- Insufficient level of delay and performance LDs
 - Reduced sponsor returns, higher tariffs
- No rejection rights in case of delayed units. Contractor limited to 125% of value of uncompleted work.
 - Required reservation and LNTP payments and cancellation guarantees
- Conclusion: off-takers asked to agree to tariff reopeners in case risk materialize. Final tariff can be much higher than “base tariff” and there is no real cap. Off-takers also asked to assist in making reservation payments in order to maintain schedule.



Crisis and Way Forward

- Sponsors attempted to convince off-takers to assume many of the EPC risks through tariff re-openers
- A commitment letter and a reservation agreement needed to be put in place in order to preserve schedule
- None of the stakeholders willing to enter into reservation agreement
- Project is being restructured to address cost and risks
- New configuration under development:
 - 2 X 660 MW (gross)
 - Project costs of USD 6 billion
 - Chinese and Korean contractors explored
 - Financing based on MDBs, Chinese ECA, South Africa banks
 - Financial close: Q2 2009. COD: Q1 2013
- Interim power solution for Botswana: 12-24 months of “emergency”/rental generation using liquid fuel (diesel or HFO)



Contact Information

Slav Gatchev

Vice President

Delphos International

ssgatchev@delphosinternational.com

Tel: (202) 337-6300

Fax: (202) 333-1158

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