Background Information

- Côte d’Ivoire, located in the West of Africa has approximately 330,000sq km and a population of 15 million by 1999.
- Since 1952, Energie Electrique de Côte d’Ivoire (EECI) has been the provider of electricity in the country.
- In 1980s, EECI ran into extreme financial difficulties as a result of the country’s deteriorating macroeconomics performance, over-expansion, severe droughts, and financial mismanagement.
- By 1990, annual losses were running at CFAF 1 billion per month, despite having one of the highest electricity tariffs in the World.
- Accumulated losses were CFAF110 bn; accumulated debt totaled CFAF 90 bn.
- The late president Houphouet Boigny and his advisers took emergency actions to address electricity crisis by undertaken a number of reforms to increase private investment and activity.
- A number of French consortiums were invited such as CIE, EdF, and CIPREL to invest in the power sector.

Why a New Power Plant?

- After the devaluation in 1994, the demand for electricity had been growing annually at a rate of 12% twice the rate of real GDP.
- Half of Côte d’Ivoire’s rural population lacked electricity and only 25% of the total population had access to electricity in 1999.
- There is export opportunity of electricity to neighbouring countries; Benin, Togo & Ghana.
- Existence of adequate supply of gas to meet the demand for a new power plant.
- Existence of strong team with technical, financial and managerial skills who are also proficient in
The Decision

The GOCI decided in 1997 to build AZITO power plant for the following reasons:

- Satisfy the strong growth of the domestic energy demand;
- Use of local natural gas resources that was discovered and ensure energetic sufficiency;
- Make Cote d’Ivoire the first electricity exporting nation in West Africa.

Azito Overview

- Azito is the second IPP in Cote d’Ivoire following CIPREL, which was developed in 1994
- The project was designed as a competitively tendered concession by the Ivorian government.
- In 1996, six consortia were pre-selected. Four submitted bids - AES, Enron, Tractebel and ABB
- In June 1997, the project was awarded to ABB, referred here as CINERGY, for being the lowest bidder
- CINERGY as a whole is co-owned by: ABB-EV, Electricité de France (EdF), and IPS (Industrial promotion services)
- ABB Energy Venture (ABB-EV), a subsidiary of Asea Brown Boveri has 37.74% holdings of the company
Azito Location

The AZITO site is close to national gas resources (off the town of Jacqueville), by the lagoon of Abidjan which enables the future cooling of the power plant, close to a high-voltage line and of the future harbour area. These advantages led the Ivorian government to choose AZITO as the more strategic location to establish the Third Thermal Power Plant in Abidjan.

Financing Arrangement

- Financing involved the government of Cote d’Ivoire, the World Bank Group and private financial institutions in Cote d’Ivoire (CINERGY).
- The World Bank Group
  - IFC (International Finance Corporation)
  - IDA (International Development Association)
- Other participants include
  - CDC & others
  - Commercial lenders
**Sources of Funds**

- IDA Guarantee $30 mm
- Equity $45 mm
- IFC ‘B’ $20 mm
- IFC ‘A’ $22 mm
- CDC Syndicate $48 mm
- Internal Cash $18 mm
- Subs. Debt $20 mm

**Uses of Funds**

- Contingency $8 mm
- Other $17 mm
- EPC-Plant $10 mm
- DSRA $15 mm
- IDC $21 mm
- Development $19 mm
- EPC-Transmission $32 mm
### SOURCES OF FINANCE FOR THE PROJECT

(Amounts in US$ millions)

<table>
<thead>
<tr>
<th>SOURCES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Sponsors Equity</td>
<td>43.89</td>
</tr>
<tr>
<td>Senior Debt</td>
<td>140.50</td>
</tr>
<tr>
<td>IFC A Loan</td>
<td>32.31</td>
</tr>
<tr>
<td>IFC B Loan</td>
<td>30.20</td>
</tr>
<tr>
<td>CDC &amp; Others</td>
<td>47.77</td>
</tr>
<tr>
<td>Commercial Lenders (IDA Guarantee Facility)</td>
<td>30.20</td>
</tr>
<tr>
<td>Subordinated Debt</td>
<td>20.07</td>
</tr>
<tr>
<td>Fixed</td>
<td>10.03</td>
</tr>
<tr>
<td>Convertible</td>
<td>10.03</td>
</tr>
<tr>
<td>Cash from Operations</td>
<td>18.47</td>
</tr>
<tr>
<td><strong>Total Sources</strong></td>
<td>222.94</td>
</tr>
</tbody>
</table>

### USES OF FINANCE FOR THE PROJECT

(Amounts in US$ millions)

<table>
<thead>
<tr>
<th>USES</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC</td>
<td>110.86</td>
</tr>
<tr>
<td>Owners EPC Contingency</td>
<td>7.50</td>
</tr>
<tr>
<td>Land for Power Stations</td>
<td>0.03</td>
</tr>
<tr>
<td>Initial Spares</td>
<td>2.11</td>
</tr>
<tr>
<td>Insurance</td>
<td>2.10</td>
</tr>
<tr>
<td>Transmission Line</td>
<td>31.85</td>
</tr>
<tr>
<td>Resettlement Indemnification</td>
<td>1.00</td>
</tr>
<tr>
<td>Reimbursable Development Costs</td>
<td>18.20</td>
</tr>
<tr>
<td>O&amp;M Mobilization</td>
<td>2.58</td>
</tr>
<tr>
<td>Initial Working Capital</td>
<td>2.19</td>
</tr>
<tr>
<td>Buffer Stock</td>
<td>7.50</td>
</tr>
<tr>
<td>Interest and Fees during Construction</td>
<td>22.24</td>
</tr>
<tr>
<td>Debt Reserve</td>
<td>14.75</td>
</tr>
<tr>
<td><strong>Total Uses</strong></td>
<td>222.94</td>
</tr>
</tbody>
</table>
Financing Terms

- IDA’s partial guarantee covers commercial loan of $30.2m for phase 1 of the project.
- IDA guarantee is based on understanding that the government, sponsors & commercial banks bear some of the potential risk associated with project, eg. construction risk & cost overrun.
- The project has charge high tariff to ensure full cost recovery loan commitment.
- Cash compensation to the affected population
- IDA demanded that the economy must be open-market oriented and stable.

Project Structure
Contractual Framework

- **The Concession Agreement (CA)** between GOCI and Cinergy was signed in 1997 and was amended in 1998.
  - BOOT
  - Government guaranteed fuel supply agreement and power purchase agreement based on capacity plus energy payments.

- **The CCEM** (“Contract Clef en Main” – turnkey contract) between ABB and GOCI
  - Agreement to finance, design, construct, supply, install and commission an energy evacuation system (“ESS”) to the national electric power grid.

Contractual Framework Cont’d

- **The Engineering Procurement and Construction Contracts (EPC)** between the GOCI and certain suppliers and contractors
  - Lot 1 contracts
  - Lot 2 contracts

- **The Operations and Maintenance Agreement (O&M)**
  - Fixed priced contracts

- Loan documentation
  - Common Agreement, the Share Retention and Project Funds Agreement, the Intercreditor Agreement
  - The Subordination Agreement and the respective Loan Agreement
Project Implementation

- Procurement was carried out in two lots:
  - Lot 1 covered the power plant, consisting of 3 phases
  - Lot 2 covered the associated transmission system

Project Implementation Cont’d

Phases under Lot 1

- Phase I (a first 150 MW turbine) was released in only 6 months time, from July 1998 to January 1999
- Phase II (a second 150 MW turbine) was commissioned in February 2000.
- Phase III consists of a combined cycle unit but not included in the project financing.
Lack of formal BOT legal framework created problems in financing. Cote d'Ivoire’s law was based on French administrative law at that time.

While any project financing requires sorting through conflicts and negotiations, the Azito project was characterized by a great deal of drama, tension and pressure on all parties.

Transmission line crosses heavily populated areas leading to government re-think of the routing of the line to minimize relocations. This led to delays in meeting completion datelines.
Key risk factors

- Commercial risk
- Gas supply risk
- Risk to the government (price, fuel)
- Resettlement issue
- Lender & Sponsor Relationships
- Legal frameworks for concessions
- Tariff framework and modification
- Regulatory institutions and oversight

Post Evaluation

- Azito has been a success and a model in Sub-Saharan Africa.
- The government, Societe Generale and IFC were able to demonstrate to the financial markets that the Ivorian power sector was financially balanced and well managed
- During development, a downstream transmission line was re-routed to minimize social impacts, also reducing the number of people to be resettled from 15,000 people to about 1,400.
- Resettlement costs were reduced as fewer people had to move and areas with significant economic activity were avoided.
Azito: Equivalent availability factor

Azito Power Plant: Power Output
Azito: share in national production

Azito Power Plant share in national production

Copyright ©2005 Ian H Giddy
Contact Information

Ian H. Giddy
NYU Stern School of Business
Tel +1.212-998-0426; Fax +1.212-995-4233
ian.giddy@nyu.edu
www.giddy.org