Amaila Falls Hydropower Project

August 2013
Project Overview

- The US$858 MM Amaila Falls Hydropower Project (“AHP” or the “Project”) includes a dam, a 165 MW power station and a 270 km, 230 kV double circuit transmission line that will connect with the Guyana Power & Light (“GPL”) grid in Linden and Georgetown.
- AHP is located ~250 km southwest of the capital, Georgetown, in west central Guyana, immediately upstream of the Kuribrong and Amaila rivers.
- GPL will purchase the Project’s entire power output pursuant to a 20 year Power Purchase Agreement (“PPA”).
- EPC services will be provided by China Railway First Group (“China Rail”).
- Access to AHP will be provided by ~85 km of new roads and ~122 km of upgrades to existing roads that are being constructed by the Government of Guyana (“GoG”).
**Project Sponsor**

**Sithe Global**
- Management team has successfully developed or acquired over 80 power plants in 10 countries totaling over 19,000 MWs of installed capacity
- Since its formation in 2004, Sithe Global has achieved financial closing on 2,325 MWs totaling US$ 3.7 billion in capital cost
- Sithe Global has extensive expertise in the development, engineering, construction, financing and operations of power generation facilities
- Management team includes many former executives of Sithe Energies, Inc., which from the mid-eighties to 2004 was one of the leading IPPs globally

**The Blackstone Group**
- Blackstone (NYSE: BX) is one of the world’s leading investment and advisory firms, with US$ 230 billion in assets under management through various investment vehicles
- Since 1988 and through June 30, 2013, Blackstone’s private equity business has invested in 174 separate transactions in a variety of industries and geographies
- Blackstone’s 78 portfolio companies generate US$ 108 billion in revenues
- Blackstone has extensive experience in the energy sector through its investments in Premcor, Kosmos Energy, Foundation Coal, TexasGenco, Moser Baer and Cheniere Energy Partners among others
- Sithe Global is Blackstone’s platform for investing in the development of power generation facilities on a worldwide basis; Blackstone owns approximately 99% of Sithe Global
Fuel and Operating Cost Savings

- **Reduce GPL’s exposure to volatile international oil prices**
  - In 2012, GPL’s fuel bill alone was $117 MM for 727 GWh of generation; the fuel and operations cost alone today is 19 and 30 US ¢/kWh for HFO and diesel generation, respectively
  - With AHP, the total cost will be reduced to ~11 US ¢/kWh in the first year of operation and ~9 US ¢/kWh over the 20 year PPA term
  - Once the asset is transferred to GPL after 20 years, the cost will be less than 2 US ¢/kWh
  - The graph below sets forth a comparison of the fuel and operating costs alone (excluding GPL’s need to replace aging generation units) with and without AHP and assumes no fuel price increases from today

![Graph showing fuel and operating cost savings over years](image_url)

- Yrs 1-12 savings = US$991 MM or 40%
- Yrs 13-20 savings = US$1.15B or 71%
- Yrs 21-100 savings = US$14.8B or 91%
Key Project Benefits

- **At the end of the 20 year contract, AHP will be transferred to GPL at zero cost. If properly maintained, AHP should have a lifespan of 100+ years**

- **Increase in the quality and reliability of electricity delivered to GPL customers through the use of new world class equipment**
  - The 230 kV double circuit transmission system will create a new backbone for the electrical system for reliable and higher quality power
  - Improved reliability will incentivize self-generators to switch to the GPL grid, reducing both their costs and emissions

- **Transform Guyana’s electricity sector from almost fully oil dependent to one built on renewable, clean energy**
  - Greenhouse gas emissions from electricity generation will be reduced by nearly 90%

- **AHP is the least cost option to satisfy GPL’s base load electricity requirements**
  - Other alternatives are either more costly (thermal), not suitable for base load (wind power) and/or insufficient to meet Guyana’s needs (biomass)

- **AHP is optimally sized based on demand projections**
  - This will allow self-generators in Georgetown and Linden to come onto the grid, creating one interconnected grid
Key Project Benefits (continued)

- Catalyze private sector development, employment generation and poverty reduction efforts
  - Access to reliable, lower cost electricity will remove a significant burden from businesses, hospitals, schools and households

- Will serve as a flagship public private partnership project, providing comfort to potential future international investors
Case Study: Bujagali Hydropower Project
Case Study: Bujagali Hydropower Project

- The Bujagali Hydropower Project (“Bujagali”) is a 250 MW hydro station located near Jinja, Uganda
- In August 2012, Sithe Global, through its majority owned subsidiary, commissioned Bujagali, the largest generating station in Uganda
- Bujagali has served as a catalyst for economic growth by eliminating load-shedding and by replacing expensive thermal generation with lower cost electricity
- Key project benefits:
  - Nearly doubled Uganda’s peak generating capacity; increased installed capacity by 44%
  - Prior to commissioning, load-shedding averaged nearly 12 hours per day, resulting in GDP reductions of 1% to 1.5% annually
  - Tariffs are ~66% lower than the marginal cost of electricity as of the commissioning date (Government of Uganda was spending ~US$ 115 MM per year on fuel subsidies)
  - Availability has averaged 99.1% over the past 6 months, and 98.5% since the start of commercial operations
- Bujagali’s project cost of $3,600 per kilowatt is almost the same as AHP’s cost per kilowatt (excluding the transmission line for both projects)
  - Unlike Bujagali, AHP includes a 270 km transmission line as part of the financing
Case Study: Bujagali Hydropower Project (continued)

Ugandan Energy Distribution Company (UMEME)
“After generation stepped up at the start of the year with Bujagali coming online, we have received a lot of positive feedback from both our large and small customers...for us, it is clear that the tough times we all experienced last year have passed...” (Umeme Managing Director, Charles Chapman, June 2012)

WORLD FINANCE MAGAZINE
“Acute power shortages were largely responsible for a reduced economic growth rate...It is now projected [due to Bujagali] that the Ugandan economy will grow by more than 5% between 2012 and 2013, compared to 3.4% in 2011 to 2012”. (World Finance Magazine, January 2013)
Project History
Project Development Timeline

*Sithe Global has spent over 6 years developing this Project*

1998–2002
- MOU Signed between GoG and Synergy / Harza/MWH, 4/98

2003–2006
- Project development delayed due to privatization of GPL and resumption by GoG, 2002–2005
- Synergy identified as potential investor, 4/07

2007–2008
- EPC bid proposals come in from 5 qualified bidders, 10/08
- Synergy transferred Interim License to Sithe Global, 10/09

2009
- Framework Agreement with China Development Bank, 7/10
- Project Agreement initiated with GoG, 6/11

2010
- IDB signs mandate letter, 9/12
- Lenders begin final diligence, documentation 1/13

2011
- EPC contract executed, 9/12
- Target to begin construction

2012
- Target financial close

2013
- EPC contract executed, 9/12
- Target to begin construction

Sithe Global has spent over 6 years developing this Project
Sithe Global Development Spend to Date

<table>
<thead>
<tr>
<th>Description</th>
<th>Amount Spent (US$ MM)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Engineering / Design</td>
<td>$3.3</td>
</tr>
<tr>
<td>Environmental</td>
<td>6.9</td>
</tr>
<tr>
<td>Legal</td>
<td>0.9</td>
</tr>
<tr>
<td>Financing</td>
<td>2.9</td>
</tr>
<tr>
<td>Other</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$16.0</strong></td>
</tr>
</tbody>
</table>

**Cumulative SG Development Expenditures**

- SG expects to spend another $4.5MM to reach financial close and cannot do so without parliamentary support for the project at the next sitting and a commitment to finish the road by year end.
Project Structure & Cost
Project Structure

- The GoG backstop guarantee of certain GPL obligations is **NOT a guarantee that GoG will have to repay any of the debt** that AHP owes to CDB & IDB.

- The guarantee is **ONLY** effective if there is a breach of contract by GPL or GoG.

**Diagram**

- **GPL**
  - **TARIFF**
  - **ELECTRICITY**

- **AFHI**
  - **AVERAGE TARIFF**
    - Yrs 1-12: $122 MM
    - Yrs 13-20: $60 MM
    - Full Contract Term: $97 MM

- **Insurers, O&M, etc.**
- **PAYMENT**
- **REPAYMENT**
  - $600.8 MM
  - $157.5 MM

- **Operating Expenses**
- **Lenders**
- **Investors**

**Note:**

- **Tariff Expenses**
  - Yrs 1-12: $122 MM
  - Yrs 13-20: $60 MM
  - Full Contract Term: $97 MM
## Estimated Project Sources and Uses

<table>
<thead>
<tr>
<th>Sources</th>
<th>%</th>
<th>$MM</th>
<th>Uses</th>
<th>%</th>
<th>$MM</th>
</tr>
</thead>
<tbody>
<tr>
<td>CDB Debt</td>
<td>83%</td>
<td>$500.8</td>
<td>EPC</td>
<td>61%</td>
<td>$524.0</td>
</tr>
<tr>
<td>IDB Debt</td>
<td>17%</td>
<td>100.0</td>
<td>Additional Construction</td>
<td>6%</td>
<td>52.5</td>
</tr>
<tr>
<td><strong>Total Debt (70%)</strong></td>
<td></td>
<td><strong>$600.8</strong></td>
<td>Start-up</td>
<td>2%</td>
<td>17.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Development</td>
<td>4%</td>
<td>30.2</td>
</tr>
<tr>
<td>Sithe Equity</td>
<td>61%</td>
<td>$157.5</td>
<td>Other</td>
<td>2%</td>
<td>20.8</td>
</tr>
<tr>
<td>GoG Equity</td>
<td>39%</td>
<td>100.0</td>
<td>Contingency*</td>
<td>3%</td>
<td>26.3</td>
</tr>
<tr>
<td><strong>Total Equity (30%)</strong></td>
<td></td>
<td><strong>$257.5</strong></td>
<td><strong>Total Capital Costs</strong></td>
<td>78%</td>
<td><strong>$671.3</strong></td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Interest During Construction</td>
<td>11%</td>
<td>$95</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Lenders’ Fees and Advisory Costs</td>
<td>4%</td>
<td>36.5</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Debt Political Risk Insurance</td>
<td>6%</td>
<td>55.0</td>
</tr>
<tr>
<td><strong>Total Financing Costs</strong></td>
<td>22%</td>
<td><strong>$187.0</strong></td>
<td><strong>Total Sources</strong></td>
<td>100%</td>
<td><strong>$858.2</strong></td>
</tr>
</tbody>
</table>

*Note: ~US$26MM of contingency spend is assumed for purposes of sizing the financing*
Project Milestones & Next Steps
Milestone Updates

• **Construction Agreements Signed**
  – The EPC Contract was signed in Xian, China, in September 2012 with *price validity ending December 31, 2013*

• **IDB Mandate Letter Signed in September 2012**

• **ESIA Addendum II documentation published in July 2013**

• **Bank Diligence and Scheduled Date for Presentation to IDB Board**
  – Bank diligence is being finalized and the parties are working jointly towards submitting the project for IDB board approval on October 30th. CDB is working in parallel.

• **China Railway Preliminary Activities**
  – China Railway, the Project’s EPC contractor, has begun early stage investigation work to give it a head start on schedule
Next Steps

• **Support from Parliament by August 12th is a condition for Sithe / Blackstone participation**
  – The Project is a major undertaking for Guyana and it will require widespread support to be successful
  – Without such support at the next sitting of Parliament, Sithe cannot continue to fund development expenses

• **Complete Environmental and Technical Due Diligence**
  – In progress

• **Lender (IDB and CDB) Approvals**
  – IDB scheduled to present project for board approval on October 30, 2013
  – Missing this board date would prevent the achievement of financial close within the EPC price validity period
  – IDB will not approve the Project without the relevant Parliamentary approvals

• **GOG to Complete Access Road by Year End**
  – GoG awards contracts for Sections 2B and the Kuribrong River Bridge by August 12, 2013

FINANCIAL CLOSE AND START OF CONSTRUCTION TARGETED FOR 4TH QUARTER 2013
Appendix A: Responses to Reported Concerns
Responses to Reported Concerns

Sources of Capital
Reported concern: GoG is contributing 82% of the total project cost but only getting a 40% ownership stake

Response: GoG is contributing 12% of the total project cost (i.e. US$100 MM) for a 40% ownership stake. The total project cost equals US$858 MM. Sithe Global will contribute US$158 MM (~18% of the total project cost). The remaining 70% of capital will come from the Project’s lenders, IDB and CDB. The debt provided by IDB and CDB is on the books of AFHI and repayment is NOT guaranteed by GoG. GoG’s guaranty backstop is only at risk if GPL or GoG breach their contractual obligations to the Project.

FX Risk
Reported concern: The PPA increases FX risk because payments are US$ based

Response: The Project will reduce Guyana’s FX risk because GPL’s Year 1 USD tariff payments of US$123 MM will offset US$216 MM (not accounting for potential price increases) of fuel that is purchased in USD. GPL’s USD based capital and maintenance expenditures will also be reduced.

Cost per kWh
Reported concern: The cost per kWh will be higher than present generation

Response: GPL’s current average generation costs for electricity are 30 and 19 US ¢/kWh for diesel and HFO, respectively; GPL payments to AHP in the first 12 years of the Project will be ~11 US ¢/kWh, reducing to 5.6 US ¢/kWh in year 13 and 1.8 US ¢/kWh after 20 years when the Project is transferred to GoG
Responses to Reported Concerns (continued)

**Demand**

Reported concern: Off-grid generators may not switch to the grid with the arrival of AHP

**Response:** Independent surveys of self-generators indicate that most prefer to be on the grid if power can be supplied reliably and at reduced cost (two key attributes of the Project); the Project has earned strong support from the business community, as evidenced by recent statements from entities like the Private Sector Commission.

**Reliability**

Reported concern: AFHI can cause blackouts six different ways

**Response:** AHP has built in significant redundancies to deliver reliable power. Those redundancies include generating power from four units that can each operate independently. The transmission system includes dual circuits each capable of evacuating 100% of the plant output. In terms of plant operations, Sithe Global’s hydropower plant in Uganda (i.e. Bujagali) has a 99% average availability factor.

**GPL Management**

Reported concern: GPL does not have the ability to manage the Project and take the power

**Response:** GPL’s ability to manage the Project has been investigated by Sithe Global and the lenders (i.e. IDB and CDB) and important changes are being implemented. Among other efforts, GPL is spending significant resources to upgrade its grid with the help of IDB and Chinese funded projects.
Responses to Reported Concerns (continued)

**Competitive Bidding**

Reported concern: There wasn’t a competitive bidding process for AHP

**Response:** Five (5) EPC proposals were received for the power plant in late 2008, followed by another round of negotiations with bidders. Bidders included: China Gezhouba Group Corporation (the main contractor of the Three Gorges Project), China National Technical Import and Export Corporation, China Railway Engineering Corporation, CNC India Group and Salini Construction. The proposals were evaluated based on price, construction and engineering experience, management capability, quality of specified critical equipment, suitability of project arrangement layout and features, quality of execution plan, financial resources, contract terms, quality assurance and control plan, health and safety plan, environmental plan and performance guarantees. Final selection took place in late 2008/early 2009.

**Cost Over PPA Term**

Reported concern: Cost of AHP is over $2.5 billion over the term of the PPA

**Response:** The sum of each annual tariff for AHP over the 20 year period results in a total cost of US$1.95B. However, the cost of generation for GPL (with no AHP) over the same period, based on today’s HFO generation cost of 19 US ¢/kWh, would be US$4.1B. Therefore, **AHP would result in savings of more than US$2.1B over the PPA term.**

<table>
<thead>
<tr>
<th>20 Year Total Payments for 1,077 GWh</th>
<th>US$ BN</th>
</tr>
</thead>
<tbody>
<tr>
<td>Without AHP</td>
<td>4.09</td>
</tr>
<tr>
<td>AHP</td>
<td>1.95</td>
</tr>
<tr>
<td>With Savings</td>
<td>2.15</td>
</tr>
</tbody>
</table>
Response to Hydrology Concerns

Reported concern: There will be an inadequate supply of water during the dry season

**Response:** AHP includes a reservoir that allows the project to store water in the wet season for use during the dry season. The reservoir is sized for 23 days of full load operation, which can be drawn on during the dry season as needed. The average annual capacity factor of the plant through both wet and dry seasons is over 80%. Even if hydrology is 10% worse than expected (a large swing for a hydro project) in a given year, AHP’s savings are significant.
Appendix B: Project Cost History
# Project Cost per Kilowatt Breakdown

<table>
<thead>
<tr>
<th>$ MM, unless otherwise noted</th>
<th>Hard Costs</th>
<th>Financing &amp; Soft Cost Allocation</th>
<th>Total Costs</th>
<th>Total $/kW</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>EPC (Power Plant Only)</strong></td>
<td>$374.1</td>
<td>$2,267</td>
<td>$198.4</td>
<td>$572.5</td>
</tr>
<tr>
<td>Transmission Line Total</td>
<td>$166.1</td>
<td>$1,007</td>
<td>$88.1</td>
<td>$254.2</td>
</tr>
<tr>
<td>EPC</td>
<td>149.9</td>
<td>909</td>
<td>79.5</td>
<td>229.4</td>
</tr>
<tr>
<td>Other (e.g. clearing, feeder road)</td>
<td>16.2</td>
<td>98</td>
<td>8.6</td>
<td>24.8</td>
</tr>
<tr>
<td>Other</td>
<td>$20.6</td>
<td>$125</td>
<td>$10.9</td>
<td>$31.5</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>$560.8</td>
<td>$3,399</td>
<td>$297.4</td>
<td>$858.2</td>
</tr>
</tbody>
</table>

EPC cost/kW is the most common way that hydro projects report cost.
# Project Cost History Comparison

<table>
<thead>
<tr>
<th>Category</th>
<th>Current Model</th>
<th>11/24/10 Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC</td>
<td>524.0</td>
<td>440.4</td>
</tr>
<tr>
<td>Additional Construction</td>
<td>52.5</td>
<td>41.0</td>
</tr>
<tr>
<td>Start-up</td>
<td>17.5</td>
<td>13.5</td>
</tr>
<tr>
<td>Development</td>
<td>30.2</td>
<td>23.0</td>
</tr>
<tr>
<td>Other</td>
<td>20.8</td>
<td>41.3</td>
</tr>
<tr>
<td>Contingency*</td>
<td>26.3</td>
<td>23.0</td>
</tr>
<tr>
<td><strong>CAPEX before Financing Fees and IDC</strong></td>
<td><strong>$671.2</strong></td>
<td><strong>$582.3</strong></td>
</tr>
<tr>
<td>Interest During Construction</td>
<td>95.4</td>
<td>58.6</td>
</tr>
<tr>
<td>Lenders' Fees and Advisory Costs</td>
<td>36.5</td>
<td>29.7</td>
</tr>
<tr>
<td>Debt Political Risk Insurance</td>
<td>55.0</td>
<td>37.9</td>
</tr>
<tr>
<td><strong>Financing Fees and IDC</strong></td>
<td><strong>$186.9</strong></td>
<td><strong>$126.3</strong></td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>$858.2</strong></td>
<td><strong>$708.6</strong></td>
</tr>
</tbody>
</table>

* Note: ~US$26.3MM of contingency spend is assumed for purposes of sizing the financing
## Project Cost Change

<table>
<thead>
<tr>
<th>Category</th>
<th>Change in Price from 11/24/10 Model to Current Model</th>
<th>Summary of Changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>EPC</td>
<td>83.6</td>
<td>EPC cost increase was due largely from FX and commodities</td>
</tr>
<tr>
<td>Additional Construction</td>
<td>11.5</td>
<td>Costs updated based on ongoing EPC negotiations</td>
</tr>
<tr>
<td>Start-up</td>
<td>4.0</td>
<td>Additional equipment required and updated operating costs</td>
</tr>
<tr>
<td>Development</td>
<td>7.2</td>
<td>Development budget increased due to environmental scope changes and additional passage of time</td>
</tr>
<tr>
<td>Other</td>
<td>(20.5)</td>
<td>Debt Service Reserve Fund no longer funded by cash</td>
</tr>
<tr>
<td>Contingency*</td>
<td>3.3</td>
<td>Increase due to increase in EPC costs. Sized as 5% of EPC and Access Road costs</td>
</tr>
</tbody>
</table>

**CAPEX before Financing Fees and IDC**

- $88.9

<table>
<thead>
<tr>
<th>Category</th>
<th>Amount</th>
<th>Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interest During Construction</td>
<td>36.8</td>
<td>Total loan amount and interest rate increased</td>
</tr>
<tr>
<td>Lenders' Fees and Advisory Costs</td>
<td>6.8</td>
<td></td>
</tr>
<tr>
<td>Debt Political Risk Insurance</td>
<td>17.1</td>
<td>CDB loan amount and Sinosure rate increased</td>
</tr>
<tr>
<td><strong>Financing Fees and IDC</strong></td>
<td>$60.7</td>
<td></td>
</tr>
</tbody>
</table>

**Total**

- $149.6

* Note: ~US$26.3MM of contingency spend is assumed for purposes of sizing the financing
EPC Cost Increase

Total EPC Costs = $524 MM

- Generating Asset Price: $314 MM
- T-Line Price: $126 MM
- EPC Cost Increase: $84 MM

EPC Cost Increase Breakdown:

- Currency Adjustment: 56%
- Price Changes on Labor, Material, and Construction Equipment: 26%
- Change in Quantities: 13%
- Other: 5%

* Note: There will be no EPC currency adjustments following financial close
Appendix C: Project Redundancy
Redundancy and Other Measures to Protect Against Outages

- AHP is designed with 4 individual units and full redundancy in the auxiliary systems to avoid unscheduled total plant outages
- The transmission system includes dual circuits each capable of evacuating 100% of the plant output
- Maintenance will be scheduled one unit at a time and performed in the dry season conserving water that can be used by the remaining units
- Outages will be scheduled in close coordination with GPL to ensure adequate backup generation is available
- The PPA requires high ongoing availability (96.5%) with payment of damages for poor performance
Appendix D: Use of Guyana Goods & Services
Guyana Goods, Services and Labor

• The EPC contract requires China Railway to undertake the following:
  – Use reasonable efforts to use materials produced in Guyana by Guyanese citizens, and services provided by Guyanese citizens
  – Use reasonable efforts to hire individuals who are Guyanese citizens and resident in Guyana
  – Actively recruit local, qualified citizens of Guyana where possible to work at the AHP site
  – Advertise upcoming hiring needs by skill category on as-as-needed basis in Georgetown, Linden, and the Amerindian villages
  – Provide adequate contractor supervisors capable of speaking fluent English to avoid discrimination against Guyanese employees
  – Provide housing in the labor camp for Guyanese employees that is equivalent to that provided to employees from the contractor’s country
  – Make reasonable provisions for Guyanese workers

• The Implementation Agreement requires AFHI to:
  – Utilize Guyanese goods and services whenever feasible
  – Train Guyanese workers to take over senior positions during the plant operating period