

**IN THE THIRD SESSION OF THE SIXTH  
PARLIAMENT OF THE FOURTH REPUBLIC  
OF GHANA**

**REPORT OF THE SELECT COMMITTEE ON  
MINES AND ENERGY**

**ON THE**

**BUILD, OWN, OPERATE AND TRANSFER  
AGREEMENT BETWEEN THE  
GOVERNMENT OF GHANA,  
REPRESENTED BY THE MINISTRY OF  
POWER AND THE AFRICA AND MIDDLE  
EAST RESOURCES INVESTMENT GROUP  
(AMERI ENERGY) LLC FOR THE  
PROVISION OF A 250MW FAST TRACK  
POWER GENERATION SOLUTION BY THE  
INSTALLATION OF TEN (10) GE TM 2500 +  
AERO DERIVATIVE GAS TURBINES IN  
GHANA**

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**THE REPORT OF THE COMMITTEE ON MINES AND ENERGY  
ON THE BUILD, OWN, OPERATE AND TRANSFER AGREEMENT  
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BY THE MINISTRY OF POWER AND THE AFRICA AND MIDDLE  
EAST RESOURCES INVESTMENT GROUP (AMERI ENERGY)  
LLC FOR THE PROVISION OF A 250MW FAST TRACK POWER  
GENERATION SOLUTION BY THE INSTALLATION OF TEN (10)  
GE TM 2500+ AERO DERIVATIVE GAS TURBINES IN GHANA**

**1.0 INTRODUCTION**

The Build, Own, Operate and Transfer Agreement between the Government of Ghana, represented by the Ministry of Power and the Africa and Middle East Resources Investment Group (Ameri Energy) LLC for the provision of a 250MW fast track power generation solution by the installation of ten (10) GE TM 2500+ aero derivative gas turbines in Ghana was laid in Parliament on Tuesday, 3<sup>rd</sup> March, 2015 by the Hon. Minister for Power, Dr. Kwabena Donkor.

The Agreement was subsequently referred to the Committee on Mines and Energy by the Rt. Hon. Speaker for consideration and report pursuant to Order 188 of the Standing Orders of Parliament.

**2.0 DELIBERATIONS**

The Committee met with the Hon. Minister for Power, Dr. Kwabena Donkor and Officials of the Ministry including the Technical Advisor to the Minister, Mr. Francis W. K. Dzata to consider the Power Agreement. The Chief Executive of the Volta River Authority (VRA), Mr. Kirk Koffi and his Officials were also in attendance to assist the Committee in its deliberations.

The Committee expresses its profound gratitude to the Officials for their attendance and for providing clarifications on issues raised at the meeting.

**3.0 REFERENCE DOCUMENTS**

The Committee referred to the following documents during deliberations on the Agreement:

- i. The 1992 Constitution;
- ii. The Standing Orders of Parliament;
- iii. The Public Utilities Regulatory Commission Act, 1997 (Act 538); and
- iv. The Environmental Protection Agency Act, 1994 (Act 490).

#### **4.0 BACKGROUND INFORMATION**

- 4.1 Though the country has been experiencing significant increases in the demand for power over the years, there has not been corresponding increase in generation capacity to meet the increasing demand.
- 4.2 At the time of the completion of the Akosombo Dam in 1965, the country's peak demand was about 100MW while the available generation capacity of the Dam was 600MW. However, with increasing demand for power over the years, the demand has now outstripped supply. The peak suppressed demand for power reached 2500MW as at the end of the year 2014 and this is further projected to hit 2,700MW in 2015.
- 4.3 The country's current installed capacity stands at 2,845.5MW with a dependability capacity of about 2,300MW. This is insufficient to meet the current demand of about 2,500MW. Coupled with this is the fact that several generating plants are unavailable, resulting in the current load shedding that the country has been experiencing.
- 4.4 In a bid to address the power deficit the government has adopted medium to short term measures to increase the country's generation capacity to meet the increasing demand. These measures focus on non-hydro sources of power as the country has exhausted all its major hydro potentials.
- 4.5 In line with the above, the Government, through the Ministry of Power signed a Power Agreement with the Africa and Middle East Resources Investment Group (Ameri Energy) LLC of Dubai for the provision of a 250MW fast track power generation solution by the installation of ten (10) GE TM 2500+ aero derivative gas turbines in Ghana.
- 4.6 It therefore became imperative that the Power Agreement be laid in Parliament for its approval as required by Article 181 (5) of the 1992 Constitution. This is also in fulfillment of a condition precedent of the Agreement as contained in Section 3 of the Power Agreement.

#### **5.0 NATURE OF THE AGREEMENT**

The Agreement is in the form of a Build, Own, Operate and Transfer (BOOT). The BOOT which has a duration of five (5) years involves the installation, operation, maintenance and transfer of ten (10) GE TM 2500+ aero derivative gas turbines by Ameri Energy in Ghana (Section 7 of the Agreement).

## **6.0 PARTIES TO THE AGREEMENT**

The parties to the Power Agreement are:

- i) the Government of Ghana, represented by the Ministry of Power and
- ii) the Africa and Middle East Resources Investment Group LLC (Ameri Energy) of Dubai.

### **6.1 The Government of Ghana**

The Government of Ghana is represented under the Agreement by the Ministry of Power. The Ministry of Power is mandated to initiate and formulate policies to ensure the effective and efficient generation, transmission and supply of power to all sectors of the economy of Ghana in an environmentally sustainable manner.

### **6.2 Africa and Middle East Resources Investment Group LLC (Ameri Energy)**

Africa and Middle East Resources Investment Group LLC (Ameri Energy) is a company incorporated in Dubai, United Arab Emirates (UAE). Ameri Energy is in the business of providing fast track power generation equipment and related services to meet the short-term and supplemental power requirements of power users.

The Company is located in Dubai, United Arab Emirates (UAE) with its Office located at Emgate Building, Sheikh Zayed Road Dubai UAE.

## **7.0 KEY OBLIGATIONS OF THE PARTIES**

7.1 By Section 8 of the Agreement, Ameri Energy has committed to:

- i. deliver, install and commission the ten (10) GE TM 2500+ aero derivative gas turbines;
- ii. operate, maintain and repair the equipment in accordance with manufacturer's instructions and prudent industry practice;
- iii. ensure that the equipment is operated by qualified operators;
- iv. be responsible for scheduled overhauls of the equipment as recommended by the manufacturer;
- v. provide onsite practical training to qualified and experienced employees six months prior to the end of the term of the Agreement; and

- vi. grant access to the State to the plant on biannual basis for the purposes of inspection of the site, the equipment and maintenance of records.

7.2 On its part, the State has also committed to obligations under Section 9 of the Agreement to:

- i. provide acceptable and suitable site for the installation;
- ii. provide utilities, site for storage and office as well as a suitable site for the setting up temporary accommodation facilities;
- iii. provide ongoing operational support services at the site including security and housing throughout the term of the Agreement;
- iv. provide the requisite fuel needed for the running of the equipment;
- v. provide, maintain and repair the components of the plant belonging to the State;
- vi. be responsible for carrying out of the scheduled overhauls of the component of the plant belonging to the State (the earth and grounding protection and tie-in points to the existing grounding system); and
- vii. be responsible for the interconnection of the plant to the electrical system of Ghana.

## 8.0 COMMERCIAL TERMS OF AGREEMENT

8.1 The following are the commercial terms of the Agreement (Annex G of the Agreement):

Equipment Payment	-	US\$850,000 per month per unit
Number of Units	-	10
Output of each unit (site)	-	23MW
Total Capacity	-	250MW (ISO)
Guaranteed Output	-	230MW
Guaranteed availability	-	90%
Total Payment per year	-	US\$102 Million
Variable charge per year	-	US\$0.005/kWh (US\$ 16.6 million p.a)
Applicable Tariff (Year 1 to 5)	-	US Cent 14.5918/kWh

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- vi. grant access to the State to the plant on biannual basis for the purposes of inspection of the site, the equipment and maintenance of records.
- 7.2 On its part, the State has also committed to obligations under Section 9 of the Agreement to:
- i. provide acceptable and suitable site for the installation;
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  - iii. provide ongoing operational support services at the site including security and housing throughout the term of the Agreement;
  - iv. provide the requisite fuel needed for the running of the equipment;
  - v. provide, maintain and repair the components of the plant belonging to the State;
  - vi. be responsible for carrying out of the scheduled overhauls of the component of the plant belonging to the State (the earth and grounding protection and tie-in points to the existing grounding system); and
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Variable charge per year	-	US\$0.005/kWh (US\$ 16.6 million p.a)
Applicable Tariff (Year 1 to 5)	-	US Cent 14.5918/kWh

Applicable Tariff (Year 6 to 20) - US Cent 10.4149/kWh

8.2 The tariff for the first five years includes the capital recovery amount which is meant to cover the purchase price of the equipment over the five-year period. The tariff after this period will reduce to US Cent 10.4149/kWh.

#### **9.0 FUEL REQUIREMENTS**

The State has undertaken to provide the gas required to run the turbines (Section 9 of the Agreement). The State intends to meet this obligation by procuring gas from the Atuabo Gas project to meet fuel requirement. The cost of the gas will be borne by VRA.

#### **10.0 ASSIGNMENT PROVISIONS**

The Agreement entitles the parties to assign their interests in the project under certain conditions. Such transfers are subject to the prior written consent of the parties (section 32 of the Agreement).

#### **11.0 DISPUTE RESOLUTION**

All disputes that may arise out of the Agreement shall be resolved by negotiation between the parties. Despite this, all invoice disputes shall be submitted to an expert for determination. The decision of the expert will be binding on the parties and shall not be subject to appeal.

#### **12.0 HEALTH AND SAFETY**

Section 15 charges the parties to take necessary precautions to ensure the safety of personnel and equipment. The Ameri Energy is required to procure insurance policies to cover injury to persons and damage to the equipment. Other relevant insurance policies are to be procured to cover risks or damage of equipment in course of installation, operation and maintenance of the equipment.

#### **13.0 OBSERVATIONS**

The Committee made the following observations during its deliberations:

##### **13.1 Rationale for choosing the BOOT Option**

Officials of the Ministry of Power informed the Committee that the Ministry considered all the available options before choosing the Build, Own, Operate and Transfer option. These were the BOOT, outright purchase and rental



options. They stated that while the BOOT Option costs US\$510 million over the period of five years, the cost of outright purchase of the equipment over the same period is estimated at US\$411 million. This leaves a difference of US\$99.0 million (i.e. about 19.8million per year). On the option for rental over the same period, the Committee was informed that it would cost the State US\$471 million which when compared to the BOOT option leaves a difference of US\$39 million.

Based on the above considerations, the Hon. Minister for Power stated that the option for the BOOT was chosen in view of the fact that it takes about 9 to 12 months to produce the generating GE equipment. He further explained that due consideration was given to the emergency situation facing the country and the benefit of using the assets acquired under the BOOT option for additional fifteen years.

### 13.2 Competitive Tariff Regime

The Committee was informed that the tariff regime under the Agreement is competitive compared with tariffs approved for existing power plants in the country. The applicable tariff under the Agreement is US Cents 14.5918/kWh for the first five years. This will reduce to US Cents 10.4149/kWh for the remaining fifteen years of the life of the plant. The above tariffs compare favourably with the approved rates as indicated in the table below:

**Approved Tariffs for Existing Power Plants in the country**

NUMBER	POWER PLANT	TARIFF (US CENTS/kWh)
1.	Akosombo GS	1.6349
2.	Kpong GS	3.3518
3.	Bui	10.4700
4.	TAPCO	11.0079
5.	TICO	16.5966
6.	TT1PP	10.5749
7.	SAPP	14.5306
8.	TT2PP	10.1947
9.	CENIT	27.0983
10.	GENZER	17.2788

### 13.3 Measures to ensure Payment of tariffs

The Committee also found that ample arrangements have been made to ensure the payment of the tariffs by the State. The Committee was informed by Officials of the Ministry of Power that the implementing agency, VRA will open an Escrow Account for the purpose of lodging revenues to be realized

from the sale of the power. The applicable tariffs will be paid out of this account as and when they fall due. Additionally, Section 5 of the Agreement requires the State to obtain an irrevocable letter of credit for the purpose as guarantee for the payment of the tariffs and other costs in the event of default of the payment on the part of VRA.

#### **13.4 Provisions relating to acquisition of the Plant**

The Committee was again informed that the Agreement makes provision for the smooth transfer of the equipment to the State after the five year term of the Agreement. Under the Build-Own-Operate-Transfer arrangement within which the Agreement will be implemented, the Ameri Energy will be responsible for the installation, operation and maintenance of the plant for five (5) years and then hand it over to the Volta River Authority. This implies that the equipment would be available to the State for power generation for the remaining fifteen years useful life of the plant. To ensure a smooth operation of the plant, the Agreement makes provision for the onsite practical training of designated staff to ensure the transfer of the requisite skills for the operation of the plant. The equipment is mobile and thus could be moved to other parts of the country as and when it becomes necessary. This serves a major boost to efforts towards the attainment of power sufficiency to drive the transformation agenda of the country.

#### **13.5 Provisions to ensure the efficient performance of the plant**

The Committee again observed that ample provisions have been made under the Agreement to ensure the efficient performance of the plant. In the event that the Ameri Energy is unable to achieve full commercial operation within the 90-day Schedule, the company would be liable to pay liquidated damages of Five Thousand US Dollars (US\$5,000.00) per turbine for each day that of the delay (Section 12 (a) of the Agreement). Additionally, Ameri Energy warrants a 90% performance of the plant over the five year term. The company will be liable to pay damages to the State if the electricity production falls below the capacity agreed under the Agreement. Again, the company has warranted that fuel consumption of the equipment will comply with the fuel consumption requirements and non compliance will entitle the State to claim fuel consumption penalty under the Agreement. The Committee considers these provisions sufficient to ensure the full realization of the object of the Agreement.

#### **13.6 Steps to facilitate smooth implementation of the Project**

Due to the exigencies of the time, the Committee was informed that preparations have been made to ensure the smooth implementation of the

project if the House approves the Agreement. Officials of the Ministry informed the Committee that the equipment will be sited at Atuabo to take advantage of part of the infrastructure for the T3 Power Plant which is currently not in operation. Again, the gas from the Atuabo Gas Processing Plant originally meant for the T3 will be made available for the running of the units.

#### 140 CONCLUSION AND RECOMMENDATION

The negative impacts of the current power challenges on domestic and industrial activities are detrimental to the economy particularly in the area of imminent job losses from industry and loss of revenue to the State. Therefore, the need to end the load shedding to bring relief to Ghanaians in the shortest possible time is a matter of urgent necessity.

In view of the above, the Committee recommends to the House to adopt its Report and approve the Build, Own, Operate and Transfer Agreement between the Government of Ghana, represented by the Ministry of Power and the Africa & Middle East Resources Investment Group LLC (Ameri Energy) in accordance with Article 181 (5) of the 1992 Constitution.

Respectfully submitted.

  
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**HON. CLETUS APUL AVOKA**  
**AG. CHAIRMAN, COMMITTEE ON**  
**MINES AND ENERGY**

  
.....  
**PEACE FIAWOYIFE (MS.)**  
**CLERK TO THE COMMITTEE**

**MARCH, 2015**