

# **TENDER DOCUMENT FOR SANTA 99 LEGACY GREEN REVOLUTION SOLAR ENERGY PROJECT**

**(AUGUST 2023)**

**Request for Proposal (RFP) of Bidders**

**For**

**Design and Installation of a 83 kW Solar PV System**

**(Adisadel College, Cape-Coast, Ghana)**

***RFP No: 1/SANTA 99/Green Revolution Solar Installation/ August-23***



**7<sup>th</sup> August 2023**

**Santa 99 Group**  
**Website: [www.santa99.com](http://www.santa99.com)**  
**E-Mail: [proposals@santa99.com](mailto:proposals@santa99.com)**

**RFP No: SANTA 99/Green Revolution Solar Installation/ August-23**

**REF: 001**

**Dated: 07.08.2023.**

The Adisadel College, popularly known as ADISCO 99-year group ((hereinafter called “SANTA 99”) invites bids from eligible bidders to participate in the Request for Proposal (RFP) of Bidders to design, supply, install, commission including warranty, operation & maintenance of a 83KW solar PV system at Adisadel College, Cape Coast.

The project involves installing a 83 KW solar PV system to provide a sustainable, clean, and cheaper energy source and a reliable energy alternative that would ensure minimal interruptions to learning and key academic work of students and staff.

The selected bidder will be responsible for implementing the above-mentioned work in the System Design, Equipment Supply, Installation, Commissioning and Testing, Documentation, and Reporting.

Interested bidders are requested to submit their proposal/application along with all supporting documents complete in all respect as per the Bid information sheet on or before 25.08.2023. Submissions shall be online only (*in pdf*) via [proposals@santa99.com](mailto:proposals@santa99.com).

Bid documents which include Eligibility criteria, “Technical Specifications”, various conditions of the contract, formats, etc. can be downloaded from [www.santa99.com](http://www.santa99.com). Any amendment (s)/corrigendum/clarifications with respect to this Bid shall be uploaded on the website only. The Bidder should regularly follow up for any Amendment/Corrigendum/ Clarification on the above website.

SANTA 99 reserves the right to reject any or all proposals without assigning any reason thereof.

SANTA 99 Project Committee

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## **DISCLAIMER**

1. Though adequate care has been taken while preparing the RFP document, the Bidders/Applicants shall satisfy themselves that the document is complete in all respects. Intimation of any discrepancy shall be given to this office immediately. If no intimation is received from any Bidder within seven (7) days from the date of notification of RFP/Issue of the RFP documents, it shall be considered that the RFP document is complete in all respects and has been received by the Bidder.
2. SANTA 99 Group Executives reserve the right to modify, amend or supplement this RFP document including all formats and Annexures.
3. While this RFP has been prepared in good faith, neither SANTA 99 consultants or advisors make any representation or warranty, express or implied, or accept any responsibility or liability, whatsoever, in respect of any statements or omissions herein, or the accuracy, completeness or reliability of information, and shall incur no liability under any law, statute, rules or regulations as to the accuracy, reliability or completeness of this RFP, even if any loss or damage is caused by any act or omission on their part.

## **BID INFORMATION SHEET**

Document Description	I. This RFP document comprises for “Bidding process for 83 kW Solar PV system.  II. Bidder can submit bids for solar PV capacity as per above up to the maximum aggregate bid capacity of 83 kW solar PV System
RfP No. & Date	RFP No: 1/SANTA 99/Green Revolution Solar Installation/ August-23 Dated: 07.08.2023
Last date & Time of Submission of Response of RfP (Online)	25.08.2023 at 16:00 Hrs.
Bid Opening (Techno-Commercial)	25.08.2023 at 16:30 Hrs.
Important Note: Prospective Bidders are requested to remain updated for any notices/amendments/clarifications etc. to the RFP document through the website. No separate notifications will be issued for such notices/amendments/clarification etc. in the print media or individually. All the information related to this RFP shall be updated on the SANTA 99 website	

## **GENERAL TERMS AND CONDITIONS FOR E-TENDERING**

1. The detail tender notice and Tender Document can be seen on **<https://www.santa99.com>** and downloaded online from the Portal: <https://www.santa99.com> by the Firms/ Individual registered on the Portal.
2. As the proposals are to be submitted online and are required to be encrypted and digitally signed, the Bidders are advised to obtain Digital Signature Certificate (DSC) at the earliest.
3. The undersigned reserves the right to reject any or all the tenders without assigning any reason whatsoever and no conditional and postal tenders will be accepted.
4. If the date on which the tenders are to be received is declared a public holiday, the tender will be received on the next working day.
5. The offer will remain valid up to 31 days from the due date of submission of tenders.
6. Any amendment to a tender after opening of tender made by the tenderer according to his own will is liable to be ignored altogether and such tenderer will be debarred from tendering for a period of six months.

## DEFINITIONS & ABBREVIATIONS

In this “Bid / RfP Document” the following words and expression will have the meaning as herein defined where the context so admits:

- 1.1. **“Affiliate”** shall mean a company that either directly or indirectly
  - a. controls or
  - b. is controlled by or
  - c. is under common control with a Bidding Company and “control” means ownership by one company of at least twenty six percent (26%) of the voting rights of the other company.
- 1.2. **“Bid”** shall mean the Techno Commercial and Price Bid submitted by the Bidder along with all documents/credentials/attachment’s annexure etc., in response to this RfP, in accordance with the terms and conditions hereof.
- 1.3. **“Bidder/Bidding Company”** shall mean Bidding Company submitting the Bid. Any reference to the Bidder includes Bidding Company / including its successors, executors and permitted assigns as the context may require.
- 1.4. **“Bid Deadline”** shall mean the last date and time for submission of Bid in response to this RfP as specified in Bid information Sheet;
- 1.5. **“Bid Capacity”** shall mean Capacity offered by the bidder in his Bid under invitation.
- 1.6. **“ECG”** shall mean Electricity Company of Ghana.
- 1.7. **“Competent Authority”** (the Designation of Competent Authority) shall mean Name of the Organization or a person or group of persons nominated by MD for the mentioned purpose herein;
- 1.8. **“Commissioning”** means Successful operation of the Project / Works by the Contractor, for the purpose of carrying out Performance Test(s) as defined in RfP.
- 1.9. **“Company”** shall mean a body incorporated in Ghana under the Companies Act, 2019 or including any amendment thereto;
- 1.10. **“Capacity Utilization Factor”** (CUF) shall mean the ratio of actual energy generated by SPV project over the year to the equivalent energy output at its rated capacity over the yearly period.  $CUF = \frac{\text{actual annual energy generated from the plant in kWh}}{(\text{installed plant capacity in kW} \times 365 \times 24)}$ .
- 1.11. **“Eligibility Criteria”** shall mean the Eligibility Criteria as set forth in this RfP;
- 1.12. **“kWp”** shall mean kilo-Watt Peak;
- 1.13. **“kWh”** shall mean kilo-Watt-hour;
- 1.14. **“Bid Capacity”** shall mean 83 kW which is the maximum capacity for which the Bidder can submit its Bid.
- 1.15. **“O&M”** shall mean Operation & Maintenance of Solar PV system for 10 years;

1.16. **“Project Cost / Project Price”** shall mean the price offered by the Bidder for the Scope of work as per RfP document.

1.17. **“Performance Ratio”** (PR) means the ratio of plant output versus installed plant capacity at any instance with respect to the radiation measured.  $PR = \frac{\text{Measured output in kW}}{\text{Installed Plant capacity in kW} \times (1000 \text{ W/m}^2 / \text{Measured radiation intensity in W/m}^2)}$ .

1.18. **“Project Company”** shall mean Company incorporated by the bidder as per Ghana Laws

1.19. **“Price Bid”** shall mean Envelope III of the Bid, containing the Bidder’s quoted Price as per this RfP;

1.20. **“Qualified Bidder”** shall mean the Bidder(s) who, after evaluation of their Techno Commercial Bid stand qualified for opening and evaluation of their Price Bid;

1.21. **“RfP”** shall mean Request for Proposal (RfP)/Bid document/Tender document

1.22. **“Statutory Auditor”** shall mean the auditor of a Company appointed under the provisions of the Companies Act, 2019 or under the provisions of any other applicable governing law;

1.23. **“Successful Bidder(s) /Contractor/Project Developers(s)”** shall mean the Bidder(s) selected by SANTA 99 legacy Executives to this RfP for Implementation of the Solar PV System as per the terms of the RfP Documents, and to whom an Award Letter has been issued;

1.24. **“Tendered Capacity”** shall mean the Total aggregate capacity in MW as proposed to be allocated by to the SANTA 99 legacy Executives Successful Bidder through this bidding process as per terms and conditions specified therein;



## **INTERPRETATIONS**

1. Words comprising the singular shall include the plural & vice versa
2. An applicable law shall be construed as reference to such applicable law including its amendments or re-enactments from time to time.
3. A time of day shall save as otherwise provided in any agreement or document be construed as a reference to Ghanaian Standard Time.
4. Different parts of this contract are to be taken as mutually explanatory and supplementary to each other and if there is any differentiation between or among the parts of this contract, they shall be interpreted in a harmonious manner so as to give effect to each part.
5. The table of contents and any headings or sub headings in the contract has been inserted for case of reference only & shall not affect the interpretation of this agreement.

# SECTION – I

## A. INTRODUCTION, BID DETAILS AND INSTRUCTIONS TO THE BIDDERS

### 1. Introduction

1.1 SANTA 99 Legacy Project intends to build a grid-tied PV system to meet the school's electricity demand in academic facilities, administration block, Dining hall, teachers' and students' accommodation, the Centenary Building, and the 98 Year group Reading Complex. This shall mark the beginning of a Green Solar Energy Revolution at Adisadel College which also aligns with Goal 7 of the United Nations Sustainable Development Goals (SDGs). The projects to be installed will be grid-tied PV systems.

1.2 The generated solar power may be utilized to electricity demand in various blocks in the school. The scheme aims to reduce the amount of money spent on purchasing electricity from the utility grid and fossil fuel consumption.

1.3 SANTA 99 hereby invites interested companies to participate in the bidding process for the selection of Successful Bidder(s) for construction of the grid-tied PV system Project at Adisadel College, Cape -Coast, Area, indicated herein under.

1.4 The Bidder is advised to carefully read all instructions and conditions appearing in this document and understand them fully. All information and documents required as per the bid document must be furnished. Failure to provide the information and / or documents as required may render the bid technically unacceptable.

1.5. The bidder shall be deemed to have examined the bid document, to have obtained his own information in all matters whatsoever that might affect the carrying out the works in line with the scope of work specified elsewhere in the document at the offered rates and to have satisfied himself to the sufficiency of his bid. The bidder shall be deemed to know the scope, nature and magnitude of the works and requirement of materials, equipment, tools and labor involved, wage structures and as to what all works, he has to complete in accordance with the bid documents irrespective of any defects, omissions or errors that may be found in the bid documents.

### 2. Bid Details

2.1. The bidding process under this RfP is for 83kW Capacity Solar Power system Model but subject to the maximum aggregate capacity of 83kW.

2.1.1. Bids are invited from the prospective bidders for the tendered capacity as indicated based on the levelized tariff Model for the allocated capacity.

### 3. Instructions to the Bidders

3.1. Bidder must meet the eligibility criteria independently as a Bidding Company.

a. Bidder will be declared as a Qualified Bidder based on meeting the eligibility criteria and as demonstrated based on documentary evidence submitted by the Bidder in the Bid.

b. Any kind of Consortium is not allowed in this Bidding Process.

- c. Further in-case where the bidding company has used the financial eligibility criteria of its parent company then it needs to be ensured that any change in the controlling equity of the Bidding company requires prior approval of SANTA 99
- d. Bidder can submit one bid only.

### **3.2. Use of Technical and/or Financial Strength of Parent Company**

3.2.1. Bidder can however use the technical and financial strength of its Parent Company or Affiliate to fulfil the Technical and/or Financial Eligibility criteria mentioned below.

3.2.2. In above case, Bidders shall submit an Undertaking from the Parent Company and also furnish a certificate of relationship of Parent Company or Affiliate with the Bidding Company.

### **3.3. Eligibility Criteria**

#### **3.3.1. General**

(a) The Bidder should be either a body incorporated in Ghana under the Companies Act 2019, Act 992 and engaged in the business of Solar Power.

(b) A copy of certificate of incorporation shall be furnished along with the bid in support of the above.

#### **3.3.2. Technical Eligibility Criteria**

The Bidder should have installed & commissioned at least one 80kW Grid connected Solar PV system which should have been commissioned at least six months prior to the Techno-Commercial Bid Opening date along with a copy of the Commissioning certificate and Work order/ Contract/ Agreement/ from the Client/Owner shall be submitted.

#### **3.3.3. Financial Eligibility Criteria**

This project is Owner Financing (OF) and Bidders' Annual turnover or Net Worth for Eligibility

### **3.4. Incorporation of a Project Company**

3.4.1. In case the Bidder wishes to incorporate a Project Company, in such a case, Bidder if selected as a Successful Bidder can incorporate a Project Company. Bidder shall be responsible to get all clearance required/obtained in the name of the Bidding Company transferred in the name of the Project Company.

### **3.5 Bid Submission by the Bidder**

3.5.1. The information and/or documents shall be submitted by the Bidder as per the formats specified in Sections I, II and III of this document.

3.5.2. Strict adherence to the formats wherever specified, is required. Wherever, information has been sought in specified formats, the Bidder shall refrain from referring to brochures /pamphlets.

Non-adherence to formats and / or submission of incomplete information may be a ground for declaring the Bid as non-responsive. Each format has to be duly signed and stamped by the authorized signatory of the Bidder before submission.

3.5.3. The Bidder shall furnish documentary evidence in support of meeting Eligibility Criteria as indicated in this document to the satisfaction of SANTA 99 Legacy Executives.

3.5.4. The tendering system for the work comprises three stages (i) Mandatory Documents (ii) Technical Bid [Eligibility qualification] and (iii) Financial Bid. The Bidders are required to submit all the above listed tendering document via the official email ([proposals@santa99.con](mailto:proposals@santa99.con)) only.

3.5.5. In Stage II [Technical Bid] the Bidder shall prepare the Documents comprising the Tender. Bidders shall attach all Copies of Certificates pertaining to their Eligibility Criteria, Qualification Information Documents, failure to provide these, the Bid shall not be considered.

3.5.6. Stage III - Submission of Online Financial Bid.

3.5.7. The Tender shall contain no Alterations or Additions, except those to comply with instructions issued by the Employer (SANTA 99 LEGACY EXECUTIVES)

### **3.6. Submission of Tenders**

3.6.1. Procurement of Tenders- Tender Documents may be downloaded from the e procurement portal [https:// www.santa99.com](https://www.santa99.com).

3.6.2. Bidders shall submit signed, complete Proposal comprising the documents and forms. The submission shall be **online only in pdf format**.

3.6.3. Only the authorized representative of the Bidder shall sign the original submission letters in the required format. Any authorization shall be in the form of a written power of attorney attached to the Documents /Proposal.

3.6.4. Any modifications, revisions, interlineations, erasures, or overwriting shall be valid only if they are signed or initialed by the person signing the Proposal.

3.6.5. The signed Proposal shall be marked “Original”. The scanned Copy shall be made from the signed original and submitted online. If there are discrepancies between the original and the scanned copies submitted online, the SANTA 99 tender committee shall decide the one that prevails.

### **3.7. Bid Submitted by a Bidding Company**

The Bidding Company should designate one person to represent the Bidding Company in its dealings with SANTA 99. The person should be authorized to perform all tasks including, but not limited to providing information, responding to enquires, signing of Bid etc. The Bidding Company should submit, along with Bid, a Power of Attorney authorizing the signatory of the Bid.

### **3.8. Clarifications and Pre-Bid Meeting**

3.8.1. SANTA 99 will not enter into any correspondence with the Bidders, except to furnish clarifications on RfP Documents, if necessary. The Bidders may seek clarifications or suggest amendments to RfP in writing, through a letter (by e-mail: [proposals@santa99.com](mailto:proposals@santa99.com)) to reach SANTA 99 at the address, date and time mentioned in Bid information sheet.

3.8.2. The Bidder(s) or their authorized representative(s) is/are invited to attend pre-bid meeting(s), which will take place on date(s) as specified in Bid information sheet, or any such other date as notified by SANTA 99.

3.8.3. The purpose of the pre-bid meeting will be to clarify any issues regarding the RfP including in particular, issues raised in writing and submitted by the Bidders.

3.8.4. SANTA 99 is not under any obligation to entertain/ respond to suggestions made or to incorporate modifications sought for.

### **3.9. Amendments to RfP**

3.9.1. At any time prior to the deadline for submission of Bids, the SANTA 99 may, for any reason, whether at its own initiative or in response to a clarification requested by a prospective Bidder, modify the RfP document by issuing clarification(s) and/or amendment(s).

3.9.2. The clarification(s)/ amendment(s) (if any) may be notified on SANTA 99 website <https://www.santa99.com> SANTA 99 at least Two (2) days before the proposed date of submission of the Bid. If any amendment is required to be notified within Two (2) days of the proposed date of submission of the Bid, the Bid Deadline may be extended for a suitable period of time.

3.9.3. SANTA 99 will not bear any responsibility or liability arising out of non-receipt of the information regarding Amendments in time or otherwise. Bidders must check the website for any such amendment before submitting their Bid.

3.9.4. In case any amendment is notified after submission of the Bid (prior to the opening of Techno-Commercial Bid. Bids received by SANTA 99 shall be returned to the concerned Bidders on their request through registered post or courier and it will be for the Bidders to submit fresh Bids as the date notified by the SANTA for the purpose.

3.9.5. All the notices related to this Bid which are required to be publicized shall be uploaded on <https://www.santa99.com>

### **3.10. Bidding Process**

3.10.1. Bid Formats

3.10.1.1. The Bid in response to this RFP shall be submitted by the Bidders in the manner provided. The Bid shall comprise of the following:

## **(A) ENVELOPE-I (MANDATORY DOCUMENTS)**

- i. Scanned Copy of Bid, as per the prescribed Format shall be submitted

## **(B) ENVELOPE- II TECHNO-COMMERCIAL DOCUMENTS**

- i. Covering Letter indicating the Capacity quoted for each Block as per the prescribed Format-1:
- ii. Covering Letter.
- iii. Copy of certificates of Bidding company.
- iv. Certificates of incorporation of Bidding company and parent company (if parent company)
- v. Evidence of payment of GHS 800.00 processing fee paid into Santa 99 Account (see below for account details)

Account Name: Santa 99

Bank: Ecobank Ghana Ltd

Branch: Head Office

Account Number: 0013024477342801

SWIFT CODE: ECOCGHACXXX

## **(C) BID DUE DATE**

The Bidder should submit the pdf copies of Bids so as to reach the email indicated below by 16:00 Hrs (GMT) on or before 25.08.2023. Email: [proposals@santa99.com](mailto:proposals@santa99.com).

### **3.11. Validity of Bid**

3.11.1. The bid and the Price Schedule included shall remain valid for a period of 6 months from the date of techno-commercial bid opening, with bidder having no right to withdraw, revoke or cancel his offer or unilaterally vary the offer submitted or any terms thereof. In case of the bidder revoking or cancelling his offer or varying any term & conditions in regard thereof or not accepting letter of allocation, the SANTA 99 Executives shall forfeit the Bid Bond furnished by him.

3.11.2. In exceptional circumstances when letter of allocation is not issued, the SANTA 99 may solicit the Bidder's consent to an extension of the period of validity. The request and the responses thereto shall be made in writing.

### **3.11.3. Method of Bid Submission**

3.11.3.1. The submission shall be done online only (*in pdf*) via [proposals@santa99.com](mailto:proposals@santa99.com).

3.11.4. All pages of the Bid and any other document executed on non-judicial stamp paper, forming part of the Bid and corrections in the Bid, if any, must be signed by the authorized signatory on behalf of the Bidder. It is clarified that the same authorized signatory shall sign all pages of the Bid. However, any published document submitted with the Bid shall be signed by the authorized

signatory at least on the first and last page of such document Bidders shall submit the Bid in original, duly signed by the authorized signatory of the Bidder.

3.11.5. The Bid must be complete in all technical and commercial respect and should contain requisite certificates, drawings, informative literature etc. as required in the Bid document.

3.11.6. Bids with any type of change or modification in any of the terms/conditions of this document shall be rejected. If necessary, additional papers may be attached by the Bidder to furnish/ submit the required information. Any term / condition proposed by the Bidder in his bid which is not in accordance with the terms and conditions of the RfP document or any financial conditions, payment terms, rebates etc. mentioned in Price Bid shall be considered as a conditional Bid and will make the Bid invalid.

### **3.12. Cost of Bidding**

3.12.1. The bidder shall bear all the costs associated with the preparation and submission of his offer, and the. SANTA 99 Group Executives will in no case be responsible or liable for those costs, under any conditions. The Bidder shall not be entitled to claim any costs, charges and expenses of and incidental to or incurred by him through or in connection with his submission of bid even though. SANTA 99 Group Executives may elect to modify / withdraw the invitation of Bid.

### **3.13. Bid Denomination**

3.13.1. The Bid shall be denominated in Ghana Cedis and shall:

- i. be in the form of either a cheque, stating the amount as spelt out in the payment terms by SANTA 99 Executives,
- ii. be confirmed for payment by the bank giving the bank guarantee by the SANTA 99 President.
- iii. be submitted in its original form; copies will not be accepted; and remain valid for a minimum period of 6 months from the date of Techno Commercial bid opening, or beyond any period of extension subsequently requested under Clause 3.11.2.

3.13.2. The Successful Bidder shall sign and stamp the Allocation Letter and return the duplicate copy of the same to. SANTA 99 Group Executives within 14 days from the date of its issue.

### **3.14. Declaration of Successful Bidder**

3.14.1. The Success Bidder shall be declared online (SANTA 99 GROUP website; [www.santa99.com](http://www.santa99.com)) and a Letter of award will be issued for onward commencement of the project.

### **3.15. Right to Withdraw the RfP and to Reject any Bid**

3.15.1. This RfP may be withdrawn or cancelled by the SANTA 99 GROUP at any time without assigning any reasons thereof. The SANTA 99 GROUP further reserves the right, at its complete

discretion, to reject any or all of the Bids without assigning any reasons whatsoever and without incurring any liability on any account.

3.15.1.1. The SANTA 99 GROUP reserve the right to interpret the Bid submitted by the Bidder in accordance with the provisions of the RFP and make its own judgment regarding the interpretation of the same. In this regard the SANTA 99 GROUP shall have no liability towards any Bidder and no Bidder shall have any recourse to the SANTA 99 GROUP with respect to the selection process. SANTA 99 GROUP shall evaluate the Bids using the evaluation process specified in Section -I, at its sole discretion. SANTA 99 GROUP decision in this regard shall be final and binding on the Bidders.

3.15.1.2. SANTA 99 GROUP reserves its right to vary, modify, revise, amend or change any of the terms and conditions of the Bid before submission. The decision regarding acceptance or rejection of bid is a sole decision of the SANTA 99 EXECUTIVE GROUP.

### **3.16. Examination of Bid Document**

3.16.1. The Bidder is required to carefully examine the Technical Specification, terms and Conditions of Contract, and other details relating to supplies as given in the Bid Document.

3.16.2. The Bidder shall be deemed to have examined the bid document including the agreement/contract, to have obtained information on all matters whatsoever that might affect to execute the project activity and to have satisfied himself as to the adequacy of his bid. The bidder shall be deemed to have known the scope, nature and magnitude of the supplies and the requirements of material and labor involved etc. and as to all supplies he has to complete in accordance with the Bid document.

3.16.3. Bidder is advised to submit the bid on the basis of conditions stipulated in the Bid Document. Bidder's standard terms and conditions if any will not be considered. The cancellation / alteration / amendment / modification in Bid documents shall not be accepted by SANTA 99 EXECUTIVE GROUP.

3.16.4. Bid not submitted as per the instructions to bidders is liable to be rejected. Bid shall confirm in all respects with requirements and conditions referred in this bid document.



## **B. CONDITIONS OF CONTRACT**

### **3.19. Scope of Work**

3.19.1. The scope of work for the bidder includes;

1. System Design:

- a. *Conduct a thorough site assessment to determine the most suitable location for the solar panels, taking into consideration factors such as shading, orientation, and available space.*
- b. *Design a 83KW solar PV system that maximizes energy generation, considering the specific requirements and electrical load of the school.*

2. Equipment Supply:

- a. *Provide high-quality solar panels, inverters, mounting structures, and other necessary components required for the installation.*
- b. *Ensure that all equipment's meet relevant industry standards and certifications.*

3. Installation:

- a. *Carry out the physical installation of the solar PV system, including the mounting of panels, wiring, and connection to the electrical grid.*
- b. *Comply with all safety regulations and best practices during the installation process.*

4. Commissioning and Testing:

- a. *Conduct thorough testing of the installed system to ensure proper functionality and performance.*
- b. *Provide documentation and training to school staff on system operation and maintenance.*

5. Documentation and Reporting:

- a. *Prepare all necessary documentation, including installation plans, electrical diagrams, and warranties.*
- b. *Provide regular progress reports throughout the project implementation.*

### **3.20. Insurance**

3.20.1. The Bidder shall be responsible and take an Insurance Policy for transits-cum-storage-cum-installation for all the materials to cover all risks and liabilities for supply of materials on site basis, storage of materials at site, erection, testing and commissioning. The bidder shall also take appropriate insurance during O&M period.

3.20.2. The Bidder shall also take insurance for Third Party Liability covering loss of human life, engineers and workmen and also covering the risks of damage to the third

party/material/equipment/properties during execution of the Contract. Before commencement of the work, the Bidder will ensure that all its employees and representatives are covered by suitable insurance against any damage, loss, injury or death arising out of the execution of the work or in carrying out the Contract. Liquidation, Death, Bankruptcy etc., shall be the responsibility of bidder.

### **3.21. Warrantees and Guarantees**

3.21.1. The Bidder shall warrant that the goods supplied under this contract are new, unused, of the most recent or latest technology and incorporate all recent improvements in design and materials. The bidder shall provide system warrantee covering the rectification of any and all defects in the design of equipment, materials and workmanship including spare parts for a period of 5 years from the date of commissioning. The successful bidder has to transfer all the Guarantees/Warrantees of the different components to the Owner of the project.

3.21.2. The responsibility of operation of Warrantee and Guarantee clauses and Claims/ Settlement of issues arising out of said clauses shall be joint responsibility of the Successful bidder and the owner of the project and SANTA 99 EXECUTIVE GROUP will not be responsible in any way for any claims whatsoever on account of the above.

### **3.22. Type and Quality of Materials and Workmanship**

3.22.1. The Design, engineering, manufacture, supply, installation, testing and performance of the equipment shall be in accordance with latest appropriate European Standards as detailed in the Section- III (Technical specifications) of the bid document. Where appropriate Ghanaian Standards and Codes are not available, other suitable standards and codes as approved by the Ghana Renewable Energy Plan shall be used.

3.22.2. The specifications of the components should meet the technical specifications mentioned in Section III.

3.22.3. Any supplies which have not been specifically mentioned in this Contract but which are necessary for the design, engineering, manufacture, supply & performance or completeness of the project shall be provided by the Bidder without any extra cost and within the time schedule for efficient and smooth operation and maintenance of the Solar PV system.

### **3.23. System Performance Evaluation**

The successful Bidder shall be required to meet minimum guaranteed generation with Performance Ratio (PR) at the time of commissioning and related Capacity Utilization Factor (CUF) as per the Global Horizontal Irradiation (GHI) levels of the location during the O&M period.

PR should show a minimum of 78% at the time of inspection for initial commissioning acceptance. Minimum CUF of 17% should be maintained for a period of 10 years. The bidder should send the periodic plant output details to SANTA 99 EXECUTIVE GROUP / Project Consultant for ensuring

proper evaluation. The PR will be measured at Inverter output level during peak radiation conditions.

### **3.24. Progress Report**

The bidder shall submit the progress report monthly to SANTA 99 EXECUTIVE GROUP / Project Consultant in Prescribed Proforma. SANTA 99 EXECUTIVE GROUP will have the right to depute his/their representatives to ascertain the progress of contract at the premises of works of the bidder.

### **3.25. Project inspection**

3.25.1 The project progress will be monitored by SANTA 99 EXECUTIVE GROUP / Project Consultant and inspected for quality at any time during commissioning or after the completion of the project either by officer(s) from the Project Consultant's team or any authorized agency/ experts as directed by the President of the SANTA 99 Group.

3.25.1.1 SANTA 99 EXECUTIVE GROUP / Project Consultant reserves the right to do sample inspection checks for the projects commissioned by the Bidder.

3.25.2. SANTA 99 EXECUTIVE GROUP may also depute a technical person(s) from its list of empaneled experts for inspection, third party verification, monitoring of system installed to oversee, the implementation as per required standards and also to visit the manufactures facilities to check the quality of products as well as to visit the system integrators to assess their technical capabilities as and when required.

### **3.26. Applicable Law**

The Contract shall be interpreted in accordance with the laws of Ghana.

### **3.27. Settlement of Dispute**

3.27.1. If any dispute of any kind whatsoever arises between SANTA 99 EXECUTIVE GROUP and Successful bidder in connection with or arising out of the contract including without prejudice to the generality of the foregoing, any question regarding the existence, validity or termination, the parties shall seek to resolve any such dispute or difference by mutual consent.

3.27.2. If the parties fail to resolve, such a dispute or difference by mutual consent, within 31 days of its arising, then the dispute shall be referred by either party by giving notice to the other party in writing of its intention to refer to arbitration as hereafter provided regarding matter under dispute. No arbitration proceedings will commence unless such notice is given. Any dispute in respect of which a notice of intention to commence arbitration has been given in accordance with Sub Clause 3.31.2, shall be finally settled by arbitration.

### **3.28. Force Majeure**

3.28.1. Notwithstanding the provisions of clauses contained in this RfP document; the contractor shall not be liable to forfeit (a) Security deposit for delay and (b) termination of contract; if he is unable to fulfill his obligation under this contract due to force majeure conditions.

3.28.2. For purpose of this clause, "Force Majeure" means an event beyond the control of the contractor and not involving the contractor's fault or negligence and not foreseeable, either in its sovereign or contractual capacity. Such events may include but are not restricted to Acts of God, wars or revolutions, fires, floods, epidemics, quarantine restrictions and fright embargoes etc. Whether a "Force majeure" situation exists or not, shall be decided by SANTA 99 EXECUTIVE GROUP / Project Consultant and its decision shall be final and binding on the contractor and all other concerned.

3.28.3. In the event that the contractor is not able to perform his obligations under this contract on account of force majeure, he will be relieved of his obligations during the force majeure period. In the event that such force majeure extends beyond 3 months, SANTA 99 EXECUTIVE GROUP has the right to terminate the contract.

3.28.4. If a force majeure situation arises, the contractor shall notify SANTA 99 EXECUTIVE GROUP in writing promptly, not later than 14 days from the date such situation arises. After examining the cases, SANTA 99 EXECUTIVE GROUP shall decide and grant suitable additional time for the completion of the work, if required.

### **3.29. Language**

3.29.1. All documents, drawings, instructions, design data, calculations, operation, maintenance and safety manuals, reports, labels and any other data shall be in English Language. The contract agreement and all correspondence between the SANTA 99 EXECUTIVE GROUP and the bidder shall be in English language.

### **3.30. Other Conditions**

3.30.1. The Successful bidder shall not transfer, assign or sublet the work under this contract or any substantial part thereof to any other party without the prior consent of the SANTA 99 EXECUTIVE GROUP in writing.

3.30.2. The Successful bidder shall not display the photographs of the work and not take advantage through publicity of the work without written permission from the SANTA 99 EXECUTIVE GROUP.

3.30.3. The Successful bidder shall not make any other use of any of the documents or information of this contract, except for the purposes of performing the contract.

3.30.4. Severability

It is stated that each paragraph, clause, sub-clause, schedule or appendix of this contract shall be deemed severable & in the event of the unenforceability of any paragraph, clause sub-clause,

schedule or the remaining part of the paragraph, clause, sub-clause, the rest of the contract shall continue to be in full force & effect.

### 3.30.5. Correspondence

Bidder requiring any clarification on bid documents may contact in writing by E Mail.

Name	Santa 99 Project Committee
Email	proposals@Santa99.com

**SECTION – II**  
**EVALUATION CRITERIA**

**4. Bid Evaluation**

**4.1. Bid Evaluation process comprises the following four steps:**

Step – I: Responsiveness check of Techno Commercial Bid

Step – II: Evaluation of Bidder’s fulfilment of Eligibility Criteria as per Clause 3.3 of Section-I

Step – III: Evaluation of Price Bid

Step – IV: Successful Bidders(s) selection

**4.2. Responsiveness Check of Techno Commercial Bid**

The Techno Commercial Bid submitted by Bidders shall be scrutinized to establish responsiveness to the requirements laid down in the RfP. Any of the following may cause the Bid to be considered “non-responsive”, at the sole discretion of the SANTA 99 EXECUTIVE GROUP:

- a. Bids that are incomplete, i.e., not accompanied by any of the applicable formats among other things; covering letter, power of attorney supported by a board resolution, applicable undertakings, format for disclosure, valid Bid Bond, etc.;*
- b. Bid not signed by authorized signatory and/ or stamped in the manner indicated in this RfP;*
- c. Material inconsistencies in the information/ documents submitted by the Bidder, affecting the Eligibility Criteria;*
- d. Information not submitted in the formats specified in this RfP;*
- e. Bid being conditional in nature;*
- f. Bid not received by the Bid Deadline;*
- g. Bid having Conflict of Interest;*
- h. More than one Member of a Bidding Company using the credentials of the same Parent Company /Affiliate;*
- i. Bidder delaying in submission of additional information or clarifications sought by the SANTA 99 EXECUTIVE GROUP as applicable;*
- j. Bidder makes any misrepresentation.*

NB: Each Bid shall be checked for compliance with the submission requirements set forth in this RfP before the evaluation of Bidder’s fulfilment of Eligibility Criteria is taken up. Clause 3.3 shall be used to check whether each Bidder meets the stipulated requirement.

## **5. Preliminary Examination**

5.1. The SANTA 99 EXECUTIVE GROUP will examine the Bids to determine whether they are complete, whether any computational errors have been made, whether required sureties have been furnished, whether the documents have been properly signed and stamped and whether the Bids are otherwise in order.

5.2. Arithmetical errors will be rectified on the following basis. If there is a discrepancy between the unit price and the total amount that is obtained by multiplying the unit price and quantity, the unit price shall prevail and the total amount shall be corrected.

If there is a discrepancy between words and figures, the amount written in words will prevail.

## **6. Evaluation of Bidder's Fulfilment of Eligibility Criteria**

### **6.1. Evaluation of Bidder's Eligibility**

Evaluation of Bidder's Eligibility will be carried out based on the information furnished by the Bidder as per the prescribed Formats and related documentary evidence in support of meeting the Eligibility Criteria as specified in Clause 3.3. Non-availability of information and related documentary evidence for the satisfaction of Eligibility Criteria may cause the Bid to be non-responsive.

### **6.2. Evaluation of Price Bid**

Price Bid of the Qualified Bidders shall be opened in presence of the representatives of such Qualified Bidders, who wish to be present, on a date as may be intimated by the SANTA 99 EXECUTIVE GROUP to the Bidders through SANTA 99 EXECUTIVE GROUP website <https://www.santa99.com>. The evaluation of Price Bid shall be carried out based on the information furnished in Envelope III (Price Bid). The Price Bid submitted by the Bidders shall be scrutinized to ensure conformity with the RfP. Any Bid not meeting any of the requirements of this RfP may cause the Bid to be considered "Non-responsive" at the sole decision of the SANTA 99 EXECUTIVE GROUP.

### **6.3. Letter of Award**

6.3.1. Letter of Award (LOA) shall be issued to the Successful Bidder selected as per the provisions of this Clause 6.3.2.

6.3.2. Each Successful Bidder shall acknowledge the LOA and return duplicate copy with signature & stamp of the authorized signatory of the Successful Bidder to the SANTA 99 EXECUTIVE GROUP within seven (7) days of issue of LOA.

6.3.3. If the Successful Bidder, to whom the Letter of Award has been issued does not fulfil any of the conditions specified in Bid document, the SANTA 99 EXECUTIVE GROUP reserves the right to annul/cancel the letter of award

#### **6.4. Notification to Successful Bidders**

6.4.1. The name of Successful Bidders shall be notified indicating the awarded project price and the capacity of the solar PV system on the SANTA 99 GROUP website; [www.santa99.com](http://www.santa99.com) after been notified individually through writing.

#### **6.5. Project Allocation and Sanction**

6.5.1. The identification of the project at time of bidding is mandatory. The Bidders, however, in their own interest are advised to make a preliminary survey of availability of the solar PV system for which they intend to Bid, as well as issue the issue of Grid connectivity.

#### **6.6 Commissioning of System**

6.6.1. Successful Bidders, shall be given 14 days from the date of issue of the award Letter for commissioning of the system as indicated in the scope. If the Bidder fails to commission the project within specified time, penalty on per day basis calculated for the Performance Security on a 6 month's period would be levied. After 30 days, the project will get cancelled and the total contract will be forfeited. Please refer Clause 8 & 9 below for details

6.6.2. The Bidder shall complete the design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of the project within 3 months from the date of issue of award Letter. The remaining 3 month shall be used for evaluation and monitoring of the system.

#### **7. Other Conditions**

##### **7.1. Tax Exemptions**

Price bids are invited inclusive of Taxes and duties. However, Tax exemptions including certificates of any sort, if available may be dealt with the concerned Dept. of the Govt. of Ghana by the bidder. SANTA 99 EXECUTIVE GROUP will in no case be responsible for providing any tax exemptions to the bidder.

#### **8. Penalty for Delay in Project Implementation**

8.1. The SANTA 99 EXECUTIVE GROUP will issue the sanction letter for the Project indicating the subsidy amount which will be disbursed in line with the provisions of the RfP document. The Bidder shall complete the project identification, design, engineering, manufacture, supply, storage, civil work, erection, testing & commissioning of the project within 3 months from the date of issue of award letter.

8.2. If the Bidder fails to commission the project within specified time, 15% penalty on installation cost would be levied.

#### **9. Time of Completion of Project**

9.1. Project completion shall be 3 months from the date of issue of award letter. The period of construction given in Time Schedule includes the time required for mobilizations as well as testing, rectifications if any, retesting and completion in all respects to the entire satisfaction of the Engineer-in-Charge.



9.2 A joint programme of execution of the Work will be prepared by the Engineer in-Charge or its representative nominated for the purpose and Successful bidders based on priority requirement of this project. This programme will take into account the time of completion mentioned in clause 9.1 above and the time allowed for the priority Works by the Engineer-in-Charge.

9.3. Monthly/Weekly implementation programme will; be drawn up by the Engineer-in Charge jointly with the Successful bidder, based on availability of Work fronts. Successful bidder shall scrupulously adhere to these targets /programmes by deploying adequate personnel, tools and tackles and he shall also supply himself all materials of his scope of supply in good time to achieve the targets/programmes. In all matters concerning the extent of targets set out in the weekly and monthly programmes and the degree of achievements, the decision of the Engineer- in-Charge will be final and binding.

## **10. Commissioning /Completion Certificate:**

**10.1. Application for completion/commissioning certificate:** When the Successful bidder fulfills his obligation under the Contract, he shall be eligible to apply for Completion Certificate. The Engineer-in-Charge shall normally issue to the Successful bidder the Completion Certificate within one month after receiving any application therefore from the Successful bidder after verifying from the completion documents and satisfying himself that the Work has been completed in accordance with and as set out in Contract documents.

### **10.1.1. Document Submission for Issue Commissioning/ Completion Certificate:**

For the purpose of Clause 10.1 above the following documents will be deemed to form the completion documents:

- a. Checklist for inspection of the PV System as per SANTA 99 EXECUTIVE GROUP format.*
- b. Project completion report from successful bidder as per SANTA 99 EXECUTIVE GROUP format*
- c. Project completion/satisfaction certificate from ADISCO Headmaster*

## **11. Developers Final Decision and Final Certificate:**

11.1. Upon completion of 10 years of O&M and subject to the Engineer-in- Charge being satisfied, the Engineer-in-Charge shall (without prejudice to the rights of the SANTA 99 EXECUTIVE GROUP to retain the provisions of relevant Clause hereof) otherwise give a certificate herein referred to as the Final Certificate to that effect and the Successful bidder shall not be considered to have fulfilled the whole of his obligations under Contract until Final Certificate shall have been given by the Engineer-in- Charge notwithstanding any previous entry upon the Work and taking possession, working or using of the same or any part thereof by the SANTA 99 EXECUTIVE GROUP.

## **12. Corrupt or Fraudulent Practices**

The SANTA 99 EXECUTIVE GROUP requires that Successful Bidders/ Contractors should follow the highest standard of ethics during the execution of contract. In pursuance of this policy, the SANTA 99 EXECUTIVE GROUP:

12.1.1. defines, for the purposes of this provision, the terms set forth as follows:

12.1.2. “Corrupt practice” means the offering, giving, receiving or soliciting of anything of value to influence the action of a public official in the bid process or in contract execution; and

12.1.3. “Fraudulent practice” means a misrepresentation of facts in order to influence a bid process or the execution of a contract to the detriment of the SANTA 99 EXECUTIVE GROUP, and includes collusive practice among Bidders (prior to or after Bid submission) designed to establish Bid prices at artificial non-competitive levels and to deprive the SANTA 99 EXECUTIVE GROUP of the benefits of free and open competition.

## SECTION-III

### TECHNICAL SPECIFICATIONS

The proposed projects shall be commissioned as per the technical specifications given below. Any shortcomings will lead to cancelation of subsidy in full or part as decided by SANTA 99 EXECUTIVE GROUP and the decision will be final and binding on the bidder.

#### **13. Definition**

A grid-tied Solar PV system consisting PV array, Module Mounting Structure, Power Conditioning Unit (PCU) consisting of Maximum Power Point Tracker (MPPT), Inverter, and Controls & Protections, interconnect cables and switches. PV Array is mounted on a suitable structure. Components and parts used in the PV power plants including the PV modules, metallic structures, cables, junction box, switches, PCUs etc., should conform to international specifications, wherever such specifications are available and applicable.

Solar PV system shall consist of following equipment's/components.

- *Solar PV modules consisting of required number of Crystalline PV modules.*
- *Grid interactive Power Conditioning Unit with Remote Monitoring System*
- *Mounting structures*
- *Invertor*
- *Batteries (if applicable)*
- *Junction Boxes.*
- *Earthing and lightning protections.*
- *IR/UV protected PVC Cables, pipes and accessories*

#### **13.1. Solar Photovoltaic Modules**

13.1.1. The PV modules used must qualify to the latest edition of IEC PV module qualification test or equivalent BIS standards Crystalline Silicon Solar Cell Modules IEC 61215/IS14286. In addition, the modules must conform to IEC 61730

**Part-2- requirements for construction & Part 2 – requirements for testing, for safety qualification or equivalent IS.**

*a) For the PV modules to be used in a highly corrosive atmosphere throughout their lifetime, they must qualify to IEC 61701/IS 61701.*

*b) The total solar PV array capacity should not be less than allocated capacity (kWp) and should comprise of solar crystalline modules of minimum 250 Wp and above wattage. Module capacity less than minimum 250 watts should not be accepted.*

*c) Protective devices against surges at the PV module shall be provided. Low voltage drop bypass diodes shall be provided.*

*d) PV modules must be tested and approved by one of the IEC authorized test centers. The module frame shall be made of corrosion resistant materials, preferably having anodized aluminum.*

f) The bidder shall carefully design & accommodate requisite numbers of the modules to achieve the rated power in his bid. SANTA 99 EXECUTIVE GROUP shall allow only minor changes at the time of execution.

g) Other general requirement for the PV modules and subsystems shall be the following:

I. The rated output power of any supplied module shall have tolerance of +/- 3%.

II. The peak-power point voltage and the peak-power point current of any supplied module and/or any module string (series connected modules) shall not vary by more than 2 (two) per cent from the respective arithmetic means for all modules and/or for all module strings, as the case may be.

III. The module shall be provided with a junction box with either provision of external screw terminal connection or sealed type and with arrangement for provision of by-pass diode. The box shall have hinged, weather proof lid with captive screws and cable gland entry points or may be of sealed type and IP-65 rated.

IV. I-V curves at STC should be provided by bidder.

### **13.1.2. Warranties:**

#### **a) Material Warranty:**

i. Material Warranty is defined as: The manufacturer should warrant the Solar Module(s) to be free from the defects and/or failures specified below for a period not less than five (05) years from the date of sale to the original customer ("Customer")

ii. Defects and/or failures due to manufacturing

iii. Defects and/or failures due to quality of materials

iv. Non conformity to specifications due to faulty manufacturing and/or inspection processes. If the solar Module(s) fails to conform to this warranty, the manufacturer will repair or replace the solar module(s), at the Owners sole option

#### **b) Performance Warranty:**

i. The predicted electrical degradation of power generated not exceeding 20% of the minimum rated power over the 10-year period and not more than 10% after 5 years period of the full rated original output.

### **14. Array Structure**

a) Hot dip galvanized MS mounting structures or Alluminum may be used for mounting the modules/ panels/arrays. Each structure should have angle of inclination as per the site conditions to take maximum insolation. However, to accommodate more capacity the angle inclination may be reduced until the plant meets the specified performance ratio requirements.

b) The mounting structure steel shall be as per latest as well as the galvanization of the mounting structure also in compliance of latest models.

c) Structural material shall be corrosion resistant and electrolytically compatible with the materials used in the module frame, its fasteners, nuts and bolts. Aluminum structures also can be used which can withstand the wind speed of respective wind zone. Necessary protection towards rusting need to be provided either by coating or anodization.

d) The fasteners used should be made up of stainless steel. The structures shall be designed to allow easy replacement of any module. The array structure shall be so designed that it will occupy minimum space without sacrificing the output from the SPV panels.

### **15. Inverter**

The total inverter capacity should not be less than 60kWAC. The inverter shall meet the European standard.

### **16. Battery storage**

The battery storage should be approximately 50% of the Total Energy Demand (TED). The system must meet a TED of 79,891.55 kWh.

Lithium ion batteries are recommended.

### **17. Junction Boxes (JBs)**

a) The junction boxes are to be provided in the PV array for termination of connecting cables. The J. Boxes (JBs) shall be made of GRP/FRP/Powder Coated Aluminum /cast aluminum alloy with full dust, water & vermin proof arrangement. All wires/cables must be terminated through cable lugs. The JB's shall be such that input & output termination can be made through suitable cable glands.

b) Copper bus bars/terminal blocks housed in the junction box with suitable termination threads conforming to IP65 standard and IEC 62208 Hinged door with EPDM rubber gasket to prevent water entry. Single / double compression cable glands. Provision of earthings. It should be placed at 5 feet height or above for ease of accessibility.

c) Each Junction Box shall have High quality Suitable capacity Metal Oxide Varistors (MOVs) / SPDs, suitable Reverse Blocking Diodes. The Junction Boxes shall have suitable arrangement monitoring and disconnection for each of the groups.

d) Suitable markings shall be provided on the bus bar for easy identification and the cable ferrules must be fitted at the cable termination points for identification

### **18. DC Distribution Board**

a) DC Distribution panel to receive the DC output from the array field.

b) DC DPBs shall have sheet from enclosure of dust & vermin proof conform to IP 65 protection. The bus bars are made of copper of desired size. Suitable capacity MCBs/MCCB shall be provided for controlling the DC power output to the PCU along with necessary surge arrestors.

## **19. AC Distribution Panel Board**

- a) AC Distribution Panel Board (DPB) shall control the AC power from PCU/ inverter, and should have necessary surge arrestors. Interconnection from ACDB to mains at LT Bus bar while in grid tied mode.
- b) All switches and the circuit breakers, connectors should conform to IEC 60947, part I, II and III/ IS60947 part I, II and III.
- c) The changeover switches, cabling work should be undertaken by the bidder as part of the project.
- d) All the Panel's shall be metal clad, totally enclosed, rigid, floor mounted, air -insulated, cubical type suitable for operation on three phase / single phase, 415 or 230 volts, 50 Hz
- e) The panels shall be designed for minimum expected ambient temperature of 45 degree Celsius, 80 percent humidity and dusty weather.
- f) All indoor panels will have protection of IP54 or better. All outdoor panels will have protection of IP65 or better.
- g) Should conform to Ghanan Electricity Act and rules (till last amendment).
- h) All the 415 AC or 230 volts devices / equipment like bus support insulators, circuit breakers, SPDs, VTs etc., mounted inside the switchgear shall be suitable for continuous operation and satisfactory performance under the following supply conditions

Variation in supply voltage +/- 10 %

Variation in supply frequency +/- 3 Hz

## **20. Integration of PV Power with Grid**

The output power from SPV will be the primary source of power supplied to the school upon installation. However, integration with grid is essential to ensure power supply to the school is maintained when power from the SPV is unavailable.

## **21. Protections**

The system should be provided with all necessary protections like earthing, Lightning, and grid islanding as follows:

### **21.1. Lightning Protection**

The SPV power plants shall be provided with lightning & overvoltage protection. The main aim in this protection shall be to reduce the over voltage to a tolerable value before it reaches the PV or other sub system components. The source of over voltage can be lightning, atmosphere disturbances etc. The entire space occupying the SPV array shall be suitably protected against Lightning by deploying required number of Lightning Arrestors. Lightning protection should be provided as per IEC62305 standard. The protection against induced high-voltages shall be provided by the use of metal oxide varistors (MOVs) and suitable earthing such that induced transients find an alternate route to earth.

## 21.2. Surge Protection

Internal surge protection shall consist of three MOV type surge-arrestors connected from +ve and –ve terminals to earth (via Y arrangement)

## 21.3. Earthing Protection

i. Each array structure of the PV yard should be grounded/ earthed properly as per IS:3043-1987. In addition, the lighting arrester/masts should also be earthed inside the array field. Earth Resistance shall be tested in presence of the representative of SANTA 99 EXECUTIVE GROUP as and when required after earthing by calibrated earth tester

ii. Earth resistance shall not be more than 5 ohms. It shall be ensured that all the earthing points are bonded together to make them at the same potential.

## 21.4. Grid Islanding

i. In the event of a power failure on the electric grid, it is required that any independent power-producing inverters attached to the grid turn off in a short period of time. This prevents the DC-to-AC inverters from continuing to feed power into small sections of the grid, known as “islands.” Powered islands present a risk to workers who may expect the area to be unpowered, and they may also damage grid-tied equipment. In addition to disconnection from the grid (due to islanding protection) disconnection due to under and over voltage conditions shall also be provided.

ii. A manual disconnect 4pole isolation switch beside automatic disconnection to grid would have to be provided at utility end to isolate the grid connection by the utility personnel to carry out any maintenance. This switch shall be locked by the utility personnel

## 22. Cables

Cables of appropriate size to be used in the system shall have the following characteristics:

*i. Shall meet IEC 60227/IS 694, IEC 60502/IS1554 standards*

*ii. Temp. Range: –10oC to +80oC.*

*iii. Voltage rating 660/1000V*

*iv. Excellent resistance to heat, cold, water, oil, abrasion, UV radiation*

*v. Flexible*

*vi. Sizes of cables between array interconnections, array to junction boxes, junction boxes to Inverter etc. shall be so selected to keep the voltage drop (power loss) of the entire solar system to the minimum. The cables (as per IS) should be insulated with a special grade PVC compound formulated for outdoor use.*

*vii. Cable Routing/ Marking: All cable/wires are to be routed in a GI cable tray and suitably tagged and marked with proper manner by good quality ferule or by other means so that the cable easily identified.*

*viii. The Cable should be so selected that it should be compatible up to the life of the solar PV panels i.e. 10years.*

*ix. The ratings given are approximate. Bidder to indicate size and length as per system design requirement. All the cables required for the plant provided by the bidder. Any change in cabling*

sizes if desired by the bidder/approved after citing appropriate reasons. All cable schedules/layout drawings approved prior to installation.

x. Multi Strand, Annealed high conductivity copper conductor PVC type 'A' pressure extruded insulation or XLPE insulation. Overall PVC/XLPE insulation for UV protection Armoured cable for underground laying. All cable trays including covers to be provided. All cables conform to latest edition of IEC/ equivalent BIS Standards as specified below: BoS item / component Standard Description Standard Number Cables General Test and Measuring Methods, PVC/XLPE insulated cables for working Voltage up to and including 1100 V, UV resistant for outdoor installation IS /IEC 69947.

xi. The size of each type of DC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 1%.

xii. The size of each type of AC cable selected shall be based on minimum voltage drop however; the maximum drop shall be limited to 2 %

### 23. Connectivity

The maximum capacity for interconnection with the grid at a specific voltage level shall be as specified in the Distribution Code/Supply Code of the State and amended from time to time. Following criteria have been suggested for selection of voltage level in the distribution system for ready reference of the solar suppliers.

Plant Capacity	Connecting Voltage
Up to 10 kW	240V-single phase or 415V-three phase at the option of the consumer
Above 10kW and up to 100 kW	415V – three phase

### 24. Fire Extinguishers

The firefighting system for the proposed power plant for fire protection shall be consisting of:

- a) Portable fire extinguishers in the control room for fire caused by electrical short circuits
- b) Sand buckets in the control room
- c) The installation of Fire Extinguishers should confirm to TAC regulations and BIS standards. The fire extinguishers shall be provided in the control room housing PCUs as well as on the Roof or site where the PV arrays have been installed.

### 25. Drawings & Manuals

i. Bidders shall provide complete technical data sheets for each equipment giving details of the specifications along with make/makes in their bid along with basic design of the system and power evacuation, synchronization along with protection equipment.

ii. Approved ISI and reputed makes for equipment be used.



*iii. For complete electro-mechanical works, bidders shall supply complete design, details and drawings for approval to SANTA 99 EXECUTIVE GROUP before progressing with the installation work.*

## **26. Planning and Designing**

*i. The bidder should carry out Shadow Analysis at the site and accordingly design strings & arrays layout considering optimal usage of space, material and labor. The bidder should submit the array layout drawings along with Shadow Analysis Report to SANTA 99 EXECUTIVE GROUP for approval.*

*ii. SANTA 99 EXECUTIVE GROUP reserves the right to modify the landscaping design, Layout and specification of sub-systems and components at any stage as per local site conditions/requirements.*

*iii. The bidder shall submit preliminary drawing for approval & based on any modification or recommendation, if any. The bidder shall submit three sets and soft copy in CD of final drawing for formal approval to proceed with construction work.*

## **27. Drawings to be Furnished by Bidder after Award of Contract**

*i. The Contractor shall furnish the following drawings Award/Intent and obtain approval*

*ii. General arrangement and dimensioned layout*

*iii. Schematic drawing showing the requirement of SV panel, Power conditioning Unit(s)/ inverter, Junction Boxes, AC and DC Distribution Boards, meters etc.*

*iv. Structural drawing along with foundation details for the structure.*

*v. Itemized bill of material for complete SV plant covering all the components and associated accessories.*

*vi. Layout of solar Power Array*

## **28 Safety Measures**

The bidder shall take entire responsibility for electrical safety of the installation(s) including connectivity with the grid and follow all the safety rules & regulations applicable as per Energy/Electricity Act, and Ministry of Energy guidelines

## SECTION IV

### Format-1: Covering Letter

(The covering letter should be on the Letter Head of the Bidding Company)

Ref. No. \_\_\_\_\_ Date: \_\_\_\_\_

From: \_\_\_\_\_

\_\_\_\_\_

(Insert name and address of Bidding Company)

Tel.: \_\_\_\_\_ Fax: \_\_\_\_\_

E-mail address: \_\_\_\_\_

**To**

SANTA 99 EXECUTIVE GROUP

Address:

Tel. No.:

Subj: Bid for “Implementation of 83kW Solar Powe System

Dear Sir,

We, the undersigned [insert name of the ‘Bidder’] having read, examined and understood in detail the RFS Document for Implementation of Solar PV System in Adisadel College Cape Coast, Ghana and we hereby submit our Bid comprising of Price Bid and Techno Commercial Bid. We confirm that neither we nor any of our Parent Company / Affiliate/Ultimate Parent Company has submitted Bid other than this Bid directly or indirectly in response to the aforesaid RfP.

1. We give our unconditional acceptance to the RfP, dated.....and RfP Documents attached thereto, issued by SANTA 99 EXECUTIVE GROUP, as amended. This shall also be construed as a token of our acceptance to the RFS Documents including all its amendments and clarifications uploaded on SANTA 99 EXECUTIVE GROUP website <https://www.santa99.com>

We shall ensure that we execute such RfP Documents as per the provisions of the RfP and all provisions of such RfP Documents shall be binding on us.

S.NO	Location	Bid Capacity

#### 2. Bid Capacity

We have bid for 83kW capacity grid-tied Solar PV ssystem at Adisadel College, Cape-Coast and have accordingly submitted our Price Bids for the same

3. We have submitted our Price Bid strictly as per Section IV of this RfP, without any deviations, conditions and without mentioning any assumptions or notes for the Price Bid in the said format(s).

4. In case we are a Successful Bidder, we shall furnish a declaration at the time of commissioning of the Project to the effect that neither we have availed nor we shall avail in future any subsidy other than received from SANTA 99 EXECUTIVE GROUP for implementation of the project.

### **5. Acceptance**

We hereby unconditionally and irrevocably agree and accept that the decision made by SANTA 99 EXECUTIVE GROUP in respect of any matter regarding or arising out of the RfP shall be binding on us. We hereby expressly waive any and all claims in respect of Bid process. We confirm that there are no litigations or disputes against us, which materially affect our ability to fulfil our obligations with regard to execution of projects of capacity offered by us.

### **6. Familiarity with Relevant Ghana Laws & Regulations**

We confirm that we have studied the provisions of the relevant Indian laws and regulations as required to enable us to submit this Bid and execute the RfP Documents, in the event of our selection as Successful Bidder. We further undertake and agree that all such factors as mentioned in RfP have been fully examined and considered while submitting the Bid.

7. We are enclosing herewith the Envelope-I (Covering letter, Processing fee) Envelope-II (Techno-Commercial documents) and Envelope III (Price Bids) containing duly signed formats, each one duly sealed separately, in one original as desired by you in the RfP for your consideration.

It is confirmed that our Bid is consistent with all the requirements of submission as stated in the RfP and subsequent communications from SANTA 99 EXECUTIVE GROUP. The information submitted in our Bid is complete, strictly as per the requirements stipulated in the RfP and is correct to the best of our knowledge and understanding. We would be solely responsible for any errors or omissions in our Bid. We confirm that all the terms and conditions of our Bid are valid for acceptance for a period of 3 months from the Bid deadline. We confirm that we have not taken any deviation so as to be deemed non-responsive.

Dated the \_\_\_\_\_ day of \_\_\_\_\_, 20....

Thanking you,

We remain,

Yours faithfully,

Name, Designation and Signature of Authorized Person in whose name Power of Attorney/Board Resolution is issued.

**Format-2: General Particulars of the Bidder**

<b>S. N</b>	<b>Particulars</b>	<b>Details</b>
1	Name of the Company	
2	Registered Office Address	
3	Telephone, Telex, Fax No	
4	E-mail	
5	Website	
6	Authorized Contact Person(s) with name, designation Address and Mobile Phone No., E-mail address/ Fax No. to whom all references shall be made	
7	Year of Incorporation	
8	Bidding company Reg. Number	
9	Bidding company TIN Number	
10	Have the bidder/Company ever been debarred by any Govt. /Dept. for undertaking any work.	
11	Reference of any document information attached by the Bidder other than specified in the RfP.	
12	Whether the Bidder wishes to form a Project Company for execution of work	Yes/No/May be
13	Bidding company is listed in Ghana	Yes/No
14	Banker Details E-mail • FAX No of the banker • Correspondence address & Pin Code	

(Signature of Authorized Signatory) With Seal

**Format-3: Power of Attorney**

(To be on non-judicial stamp paper of appropriate value as per Stamp Act relevant to Cape Coast)

(Power of Attorney to be provided by the Bidding Company in favour of its representative as evidence of authorized signatory's authority)

Know all men by these presents, We ..... (name and address of the registered office of the Bidding Company as applicable) do hereby constitute, appoint and authorize Mr./Ms. .... (name & residential address) who is presently employed with us and holding the position of ..... as our true and lawful attorney, to do in our name and on our behalf, all such acts, deeds and things necessary in connection with or incidental to submission of our Bid for implementation of grid connected Roof top solar PV projects in response to the RfP No ..... dated ..... issued by SANTA 99 EXECUTIVE GROUP, including signing and submission of the Bid and all other documents related to the Bid, including but not limited to undertakings, letters, certificates, acceptances, clarifications, guarantees or any other document which the SANTA 99 EXECUTIVE GROUP may require us to submit. The aforesaid Attorney is further authorized for making representations to the SANTA 99 EXECUTIVE GROUP, and providing information / responses SANTA 99 EXECUTIVE GROUP representing us in all matters before SANTA 99 EXECUTIVE GROUP and generally dealing with SANTA 99 EXECUTIVE GROUP in all matters in connection with this Bid till the completion of the bidding process as per the terms of the above mentioned RfP.

We hereby agree to ratify all acts, deeds and things done by our said attorney pursuant to this Power of Attorney and that all acts, deeds and things done by our aforesaid attorney shall be binding on us and shall always be deemed to have been done by us.

All the terms used herein but not defined shall have the meaning ascribed to such terms under the RFS.

Signed by the within named

..... (Insert the name of the executant company) through the hand of Mr. ....duly authorized by the Board (vide Board resolution No \_\_\_\_\_) to issue such Power of Attorney

Dated this ..... day of .....

Accepted

.....

Signature of Attorney

(Name, designation and address of the Attorney)

Attested

.....

(Signature of the executant)

(Name, designation and address of the executant)

.....

Signature and stamp of Notary of the place of execution

Common seal of ..... has been affixed in my/our presence pursuant to Board of Director’s Resolution dated..... (Board of Director’s Resolution is also enclosed)

WITNESS

1. ....

(Signature)

Name.....

Designation .....

2. ....

(Signature)

Name.....

Designation .....

NB: The mode of execution of the power of attorney should be in accordance with the procedure, if any, laid down by the applicable law and the charter documents of the executant(s) and the same should be under common seal of the executant affixed in accordance with the applicable procedure. Further, the person whose signatures are to be provided on the power of attorney shall be duly authorized by the executant(s) in this regard.

The person authorized under this Power of Attorney, in the case of the Bidding Company being a public company, or a private company which is a subsidiary of a public company, in terms of the Companies Act, 2012, with a paid up share capital of more than GH¢, should be the Managing Director / whole time director/manager appointed under section ..... of the Companies Act,2012. In all other cases the person authorized should be a director duly authorized by a board resolution duly passed by the Company.

Also, wherever required, the executant(s) should submit for verification the extract of the chartered documents and documents such as a Board resolution / power of attorney, in favour of the person executing this power of attorney for delegation of power hereunder on behalf of the executant(s).

## **Format-4: Pre Contract Integrity Pact**

### **1. GENERAL**

1.1. This pre-bid contract agreement (herein after called the Integrity Pact) is made on .....day of the month .....between the SANTA 99 EXECUTIVE GROUP acting through the Executive President ..... (Hereinafter called the “BUYER” which expression shall mean and include, unless the context otherwise requires, his successors in the office and assigns) and the First Party, proposes to procure..... (Name of the Store/Equipment/ Work/ Service) and M/s. ....represented by Shri ..... (herein after called the BIDDER/Seller, which expression shall mean and include, unless the context otherwise requires, his successors an permitted assigns) and the Second Party, is willing to offer/ has offered.

1.2. WHEREAS the BIDDER is a Private Company/ Public Company/ Government Undertaking/ Partnership/ Registered Export Agency, constituted in accordance with the relevant law in the matter and the BUYER, performing its function as SPV under provision of Companies Act 2012.

### **2. OBJECTIVES**

NOW, THEREFORE, the BUYER and the BIDDER agree to enter into this pre-contract agreement, hereinafter referred to as Integrity Pact to avoid all forms of corruption by following a system that is fair, transparent and free from any influence/ prejudiced dealings prior to, during and subsequent to the Contract to be entered into which a view to:-

2.1. Enabling the BUYER to obtain the desired Stores/ Equipment/Work/Service at a competitive price in conformity with the defined specifications by avoiding the high cost and the distortionary impact of corruption on public procurement, and

2.2. Enabling BIDDER to abstain from bribing or indulging in any corrupt practices in order to secure the contract by providing assurance to them that their competitors will also abstain from bribing any corrupt practices and the BUYER will commit to prevent corruption, in any form, by its official by following transparent procedures.

### **3. COMMITMENTS OF THE BUYER**

The BUYER commits itself to the following:-

3.1. The BUYER undertakes that no official of the BUYER connected directly or indirectly with the contract, will demand, take promise for or accept, directly or through intermediaries, any bribe, consideration, gift, reward, favour or any material or immaterial benefits or any other advantage from the BIDDER, either for themselves or for any person, organization or third party related to the contract in exchange for an advantage in the bidding process, bid evaluation , contracting or implementation process related to the contract.

3.2. The BUYER will, during the pre-contract stage, treat BIDDERS alike, and will provide to all BIDDERS the same information and will not provide any such information to any particular

BIDDER which could afford an advantage to that particular BIDDER in comparison to the other BIDDERS

3.3. All the officials of the BUYER will report the appropriate Government office any attempted or completed breaches of the above commitments as well as any substantial suspicion of such a breach.

3.4. In case any such preceding misconduct on the part of such official(s) is reported by the BIDDER to the BUYER with the full and verifiable facts and the same prima facie found to be correct by the BUYER, necessary disciplinary proceedings, or any other action as deemed fit, including criminal proceedings may be initiated by the BUYER and such a person shall be debarred from further dealings related to the contract process. In such a case while an enquiry is being conducted by the BUYER the proceedings under the contract would not be stalled.

#### 4. COMMITMENTS OF BIDDERS

The BIDDER commits itself to take all measures necessary to prevent corrupt practices, unfair means and illegal activities during any stage of its bid or during any precontract or pre-contract stage in order to secure the contract or in furtherance to secure it and in particular commit itself to the following:-

4.1. The BIDDER will not offer, directly or through intermediaries, any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage or inducement to any official of the BUYER, connected directly or indirectly with the bidding process, or to any person, organization or third party related to the contract in exchange for any advantage in the bidding, evaluation, contracting and implementation of the contract.

4.2. The BIDDER further undertakes that it has not been given, offered or promised to give, directly or indirectly any bribe, gift, consideration, reward, favour, any material or immaterial benefit or other advantage, commission, fees, brokerage, or inducement to any official of the BUYER or otherwise in procuring the Contract or forbearing to do or having done any act in relation to the obtaining or execution of the contract or any other contract with the Government for showing or forbearing to show favour or disfavour to any person in relation to the contract or any other contract with the Government.

4.3. The BIDDER further confirms and declares to the BUYER that the BIDDER in the original Manufacture/Integrator/Authorized government sponsored export entity of the stores and has not engaged in individual or firm or company whether Indian or Foreign to intercede, facilitate or in any way to recommend to the BUYER or any of its functionaries, whether officially or unofficially to the award of the contract to the BIDDER, nor has any amount been paid, promised or intended



to be paid to any such individual, firm or company in respect of any such intercession, facilitation or recommendation.

4.4. The BIDDER, either while presenting the bid or during pre-contract negotiations or before signing the contract, shall disclose any payment he has made, is committed to or intends to make to officials of the BUYER or their family members, agents, brokers or any other intermediaries in connection with the contract and the details of services agreed upon for such payments.

4.5. The BIDDER will not collude with other parties interested in the contract to impair the transparency, fairness and progress of the bidding process, bid evaluation contracting and implementation of the contract.

4.6. The BIDDER will not accept any advantage in exchange for any corrupt practice, unfair means and illegal activities.

4.7. The BIDDER shall not use improperly, for purpose of competition or personal gain, or pass on to others, any information provided by the BUYER as part of the business relationship, regarding plans, technical proposal and business details, including information contained in any electronic data carrier. The BIDDER also undertakes to exercise due and adequate care lest any such information is divulged.

4.8. The BIDDER commits to refrain from giving any complaint directly or through any other manner without supporting it with full and verifiable facts.

4.9. The BIDDER shall not instigate or cause to instigate any third person to commit any of the acts mentioned above.

## 5. FACILITATION OF INVESTIGATION

In case of any allegation of violation of any provisions of this Pact or payment of commission, the BUYER or its agencies shall be entitled to examine all the documents including the Books of Accounts of the BIDDER and the BIDDER shall provide necessary information of the relevant documents and shall extend all possible help for the purpose of such examination.

## 6. LAW AND PLACE OF JURISDICTION

This Pact is subject to Indian Law, the place of performance and jurisdiction shall be the seat of the BUYER.

7. OTHER LEGAL ACTIONS:

The actions stipulated in this Integrity Pact are without prejudice to any other legal action that may follow in accordance with the provisions of the any other law in force relating to any civil or criminal proceedings. If one or several provisions of this Pact turn out to be invalid; the remainder of this pact shall remain valid. In such case, the parties will strive to come to an agreement to their original intentions.

8. The parties hereby sign this Integrity Pact at .....on .....

BUYER

BIDDER