Betterworld Solar Farm, Maharashtra

Methodology Report

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1 Introduction

The following document concerns the Betterworld Solar Farm located in Maharashtra, India. The Betterworld Solar Farm is a renewable energy project undertaken by A.E.S Engineering Ltd. for the purposes of providing clean energy to the Indian grid as part of the A.E.S commitment to tackling climate change. The primary purpose of this project is to reduce the greenhouse gas (GHG) emissions of the Indian grid by supplanting carbon-intensive energy with entirely carbon-free renewable generated energy.

This document serves to detail the project, the benefit of the project in terms of GHG emissions, the methods by which these reduced GHG emissions are calculated, and how these GHG emissions reductions are to be reported by A.E.S Engineering Ltd.

2 Responsible Undertaking

The project proponent is AESEngineering Solar Private Limited, a private company located in Pune, Maharashtra, India. AESEngineering Solar Private Limited is under the ownership, and is a subsidiary, of A.E.S Engineering Ltd.. A.E.S Engineering Ltd. is the holding company of the AESSEAL group of companies, and is both based and registered in Rotherham, South Yorkshire, United Kingdom.

The details for AESEngineering Solar Private Limited are listed below:

- **Corporate Identification Number:** U40106PN2022FTC213177
- **Incorporation Date:** 19th July, 2022
- **Registered Address:**
  GAT NO 85 VILLAGE VARVE
  TAL BHOR KHED SHIVAPUR PUNE
  PUNE
  Pune - 412205
  Maharashtra - India
- **Responsible Directors:**
  Mr Stephen Shaw
  Stephen.Shaw@aesseal.co.uk
  +44 1709 369966

  Mr Nayan Patel
  Nayan.Patel@aesseal.in
  +91 2113 233 333

  Mr Alastair Womack
  Alastair.Womack@aesseal.co.uk
  +44 1709 369966

The details for A.E.S Engineering Ltd. are listed below:

- **Company Registration Number:** 00392743
- **Standard Industry Classification:** 28290
- **Registered Address:**
  Global Technology Centre
  Bradmarsh Business Park
  Mill Close
  Rotherham
  South Yorkshire
  S60 1BZ
- **Responsible Director:**
  Mr Stephen Shaw
  Stephen.Shaw@aesseal.co.uk
  +44 1709 369966

3 Purposes of the GHG Project

The creation of the Betterworld Solar Farm was undertaken for the purposes of reducing GHG emissions, and subsequently the creation of quantified GHG emissions reductions through a consistent and conservative approach based upon the *Large-Scaled Consolidated Methodology for Grid-connected electricity generation from renewable sources* as published by the *United Nations Framework Convention on Climate Change*.

These quantified GHG emissions reductions are to count against the residual Scope 1 and 2 emissions of A.E.S Engineering Ltd. whilst efforts to eliminate these emissions continue.

3.1 A.E.S Engineering Ltd.

A.E.S Engineering Ltd. is a holding company for the AESSEAL group of companies. The AESSEAL group of companies produce mechanical seals, sealing products and seal support products for a global market. The group has a global presence in multiple countries and multiple legal subsidiaries under the ownership of A.E.S Engineering Ltd. These subsidiaries serve as local regional centres for sales, seal repairs, and in certain cases also support with manufacturing and assembly. A.E.S Engineering Ltd. and the AESSEAL group of companies are henceforth referred to as AES within this document.

For well over a decade, AES has had a strong focus on operating sustainably. Certification to ISO 14001 was first gained for its UK subsidiary in 2003, with many operational sites around the globe following. Further to this in 2012 the head office in Rotherham gained certification to ISO 50001. Over the past three years, this effort and focus on sustainability has resulted in significant investment aimed at reducing GHG emissions. The company has committed to spending £29 million by the year 2029 on environmental projects, and over £11 million of this has already been invested in environmental projects across the globe.

3.2 GHG Accounting & ISO 14064-1

Every year, A.E.S Engineering Ltd. carries out an annual assessment of its GHG emissions in accordance with the GHG protocol, this assessment is then verified to the ISO 14064-1 standard. A.E.S Engineering Ltd. has now carried out three of these assessments and has seen year-on-year reductions in Scope 1 & 2 emissions. For more details of this assessment as well as the company's carbon reduction plan, please see the published ISO 14064-1 report for A.E.S Engineering Ltd.

AES will continue to push to reduce Scope 1 & 2 emissions to zero and has already seen significant success in doing so with combined Scope 1 & 2 emissions falling by *17%* in just three years despite substantial growth of the company during this time. However, it is expected that certain aspects of Scope 1 emissions (primarily fleet emissions) will prove very difficult to eliminate. Eliminating the emissions from the vehicle fleet for example, requires a well-developed alternative infrastructure such as EV charging points and a low-carbon electrical grid which is not present in many of the countries in which AES operates. Consequently, each year A.E.S Engineering Ltd. purchases an amount of offsets from either Gold Standard or VERRA to cover its residual Scope 1 & 2 emissions whilst carbon reductions efforts are ongoing.

3.3 Company Owned Offsets

Whilst the company does aim to choose offsetting projects that align with UN sustainability goals and also carry supplemental benefits to local communities or wildlife, the company wishes to transition away from reliance upon VERRA and Gold Standard schemes to cover its' residual emissions. The primary reasons for doing so are control, transparency, and a desire to exert a greater direct impact.

Research and scrutiny by media organisations has resulted in many valid questions raised at purchased offsets. Questions have been raised over the validity of individual projects as well as the calculation methods by which the emissions benefits (either GHG reductions or GHG removals) have been calculated. As a result of this, AES wishes to have complete and total confidence that any claimed benefits it makes are fully legitimate. By creating and owning its own GHG project, AES can be fully confident that it has created a direct positive impact and is able to be in control over the claims made in relation to it.

Owning and controlling a GHG project allows AES to be more conservative in its calculation of GHG emissions reductions in comparison to many approved projects, and also to be more transparent on how these calculations are carried out.

4 Timeline & Key Dates

The project was first conceived of as an idea in 2022 for tackling residual emissions. A contract was first signed for construction on the 1st of September 2022. Construction then took place throughout the end of 2022 and beginning of 2023 and was completed in March of 2023.

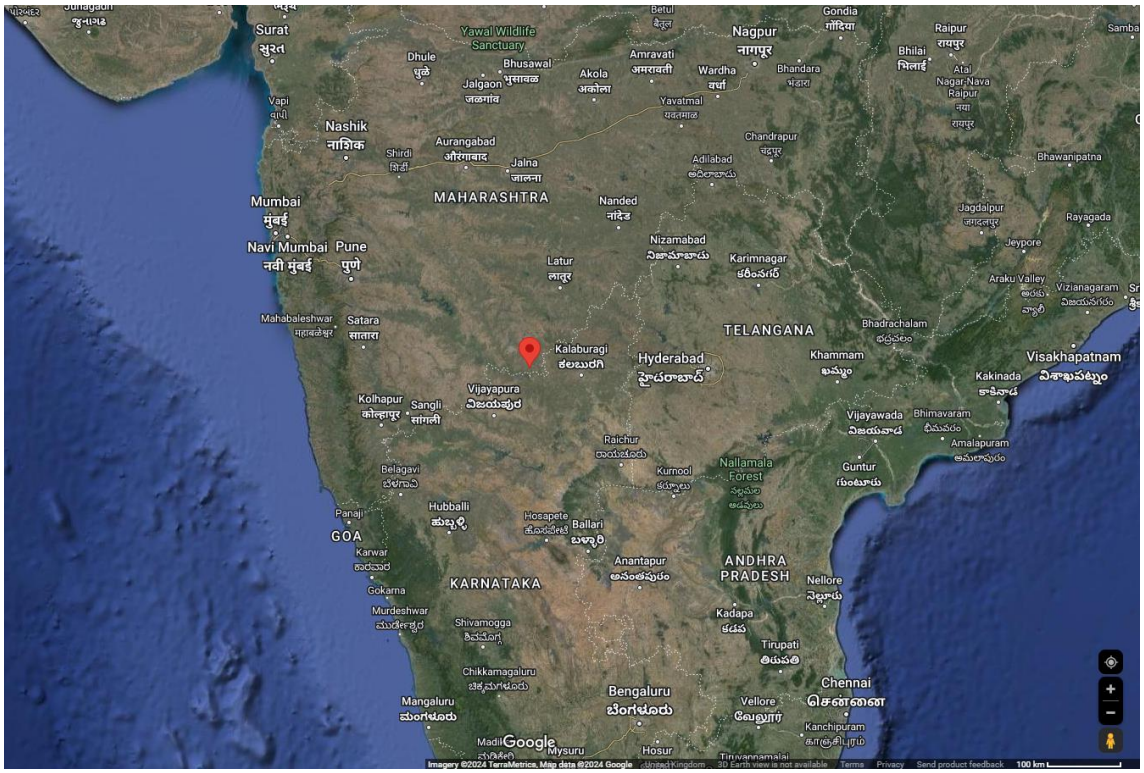
The project first began generating electricity on the 23rd of March 2023, this date is considered to be the start date for this GHG project. Commissioning of the project by the Maharashtra State Electricity Distribution Company then took place on the 27th of March 2023.

5 Project Location & Description

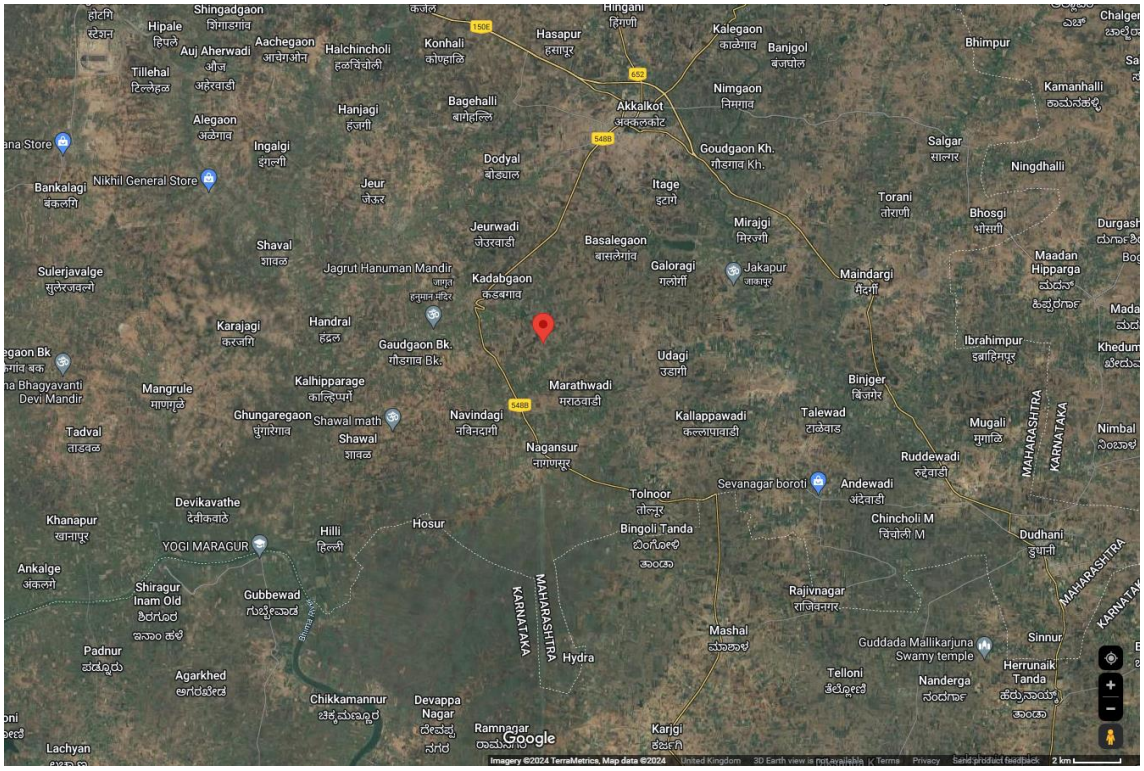
5.1 Project Location

The Betterworld Solar Farm is part of a larger installation, SSSSGELLP 10 MW Solar Park at Village Guravwadi, Tal Akkalkot, Dist. Solapur, Maharashtra, India. The site is located at Gat no. 111/1A & 111/1/B, Nagansur, Akkalkot, Solapur, Maharashtra, the exact location of this site being 17.436552, 76.166140.

The site is located in close proximity to a railway line in the boundaries of the village of Guravwadi, with the centre of Guravwadi village itself lying approximately 1 km to the south-east of the solar park. Other nearby settlements are Nagansur (approximately 5 km to the south), Akkalkot (approximately 9 km to the north), and the district headquarters of Solapur (approximately 40 km to the north-east).



Location of the solar farm within Maharashtra.



Location of the solar farm in relation to the city of Akkalkot.

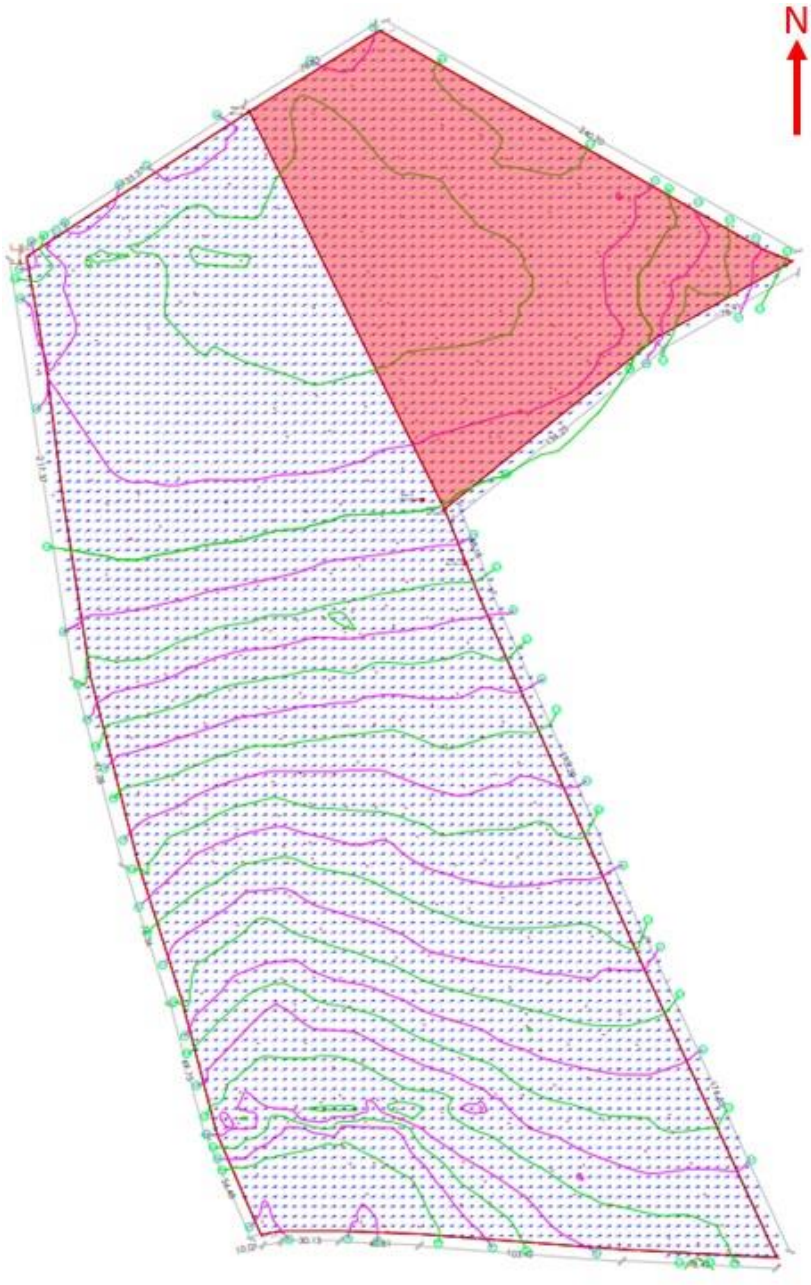
5.2 Project Description

The Betterworld solar farm is part of a larger solar farm which includes areas under the ownership of organisations not affiliated to AES or AESEngineering Solar Private Limited:

Name Of Solar Generators	Date of Commissioning	AC Capacity (MW)
M/s Kanakal Wind Energy Pvt Ltd.	28/12/2022	1.600
M/s Jalansar Wind Energy Pvt Ltd.	28/12/2022	1.100
M/s First Energy 2 Pvt Ltd.	23/03/2023	5.175
M/s AES Engineering Solar Pvt Ltd.	**23/03/2023**	**1.980**

The wider installation is a collaborative project between Variate Consultants PVT Ltd. and Skeiron Group, with the total installation being 9.855 MW capacity of AC connected generation. This document only concerns the Betterworld Solar Farm, which falls under the ownership of AESEngineering Solar Private Limited. Betterworld Solar Farm shares common infrastructure of the substation and transmission lines with the wider installation. Other services such as wider site security are also shared across the entire installation inclusive of the Betterworld Solar Farm.

AES Engineering Solar Private Ltd. (the project proponent) is the owner of the site whilst design, supply, and installation of equipment was carried out by Variate Consultants Pvt Ltd. on behalf of the project proponent. After completion of the installation, ownership transferred to the project proponent AESEngineering Solar Private Ltd.



Location of the Betterworld Solar Farm (in red) in relation to the wider installation.

The term ‘solar farm’ within this document thus refers only to the Betterworld Solar Farm under the ownership of AESEngineering Solar Private Ltd. and not the wider installation.

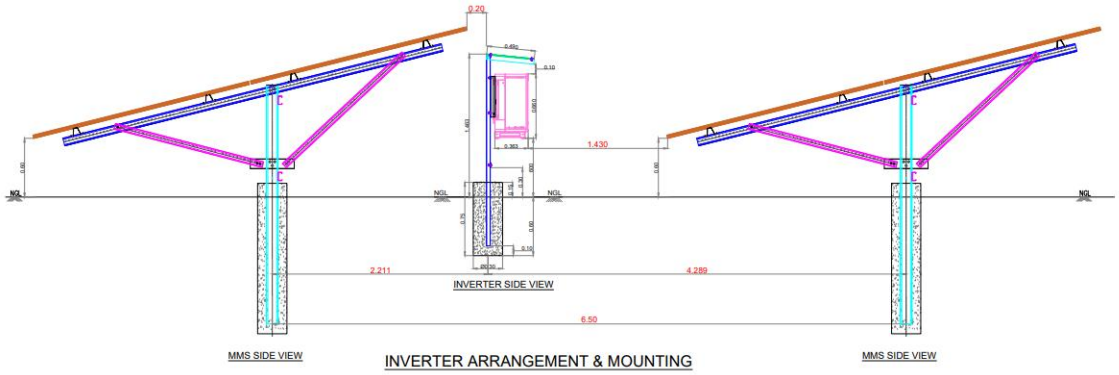
6 Project Technical Information

6.1 Equipment

The solar farm consists of *5133* photovoltaic panels, the panels are a fixed-tilt ground-based install mounted with a fixed tilt angle of 14º. Each panel is a *545* watt-peak capacity panel, manufactured by Vikram Solar, this results in a total installed capacity of *2797.485 kWp.*

Example of a PV array as installed at the Betterworld Solar Farm.

Panels are split into 9 arrays, each of which supply a single *220 kVA* Sungrow inverter. There are *6* arrays which contain *580* panels for a total of *316.1 kWp* per array, and a further *3* arrays which contain *551* panels for a total of *300.295 kWp* per array. These 9 inverters from each array allow for a theoretical maximum generation of *1980 kVA* AC power for export to the grid.



Inverter arrangement and PV mounting arrangement as used at the Betterworld Solar Farm.

Finally, all AC generation passes through a single *2 MVA* oil-filled transformer, this steps up voltage to *33 kV* for export to the grid.

Layout of installed PV arrays at the Betterworld Solar Farm.

Please see the appendix of this document for a full single line diagram and PV array layout for the solar farm.

6.2 Expected Generation

Within the first twelve months, the project is expected to generate an estimated *3,716,020 kWh*. Estimates have been made for subsequent years based upon manufacturers guidelines of panel degradation of *3%* in the first year, and *0.65%* in each year following. No termination date has been set for this GHG project, however the expected lifespan of the panels is approximately *25* years.

Year	Expected Generation (kWh)

1	3,716,020
2	3,604,539
3	3,581,110
4	3,557,833
5	3,534,707
6	3,511,731
7	3,488,905
8	3,466,227
9	3,443,697
10	3,421,313
11	3,399,074
12	3,376,980
13	3,355,030
14	3,333,222
15	3,311,556
16	3,290,031
17	3,268,646
18	3,247,400
19	3,226,291
20	3,205,321

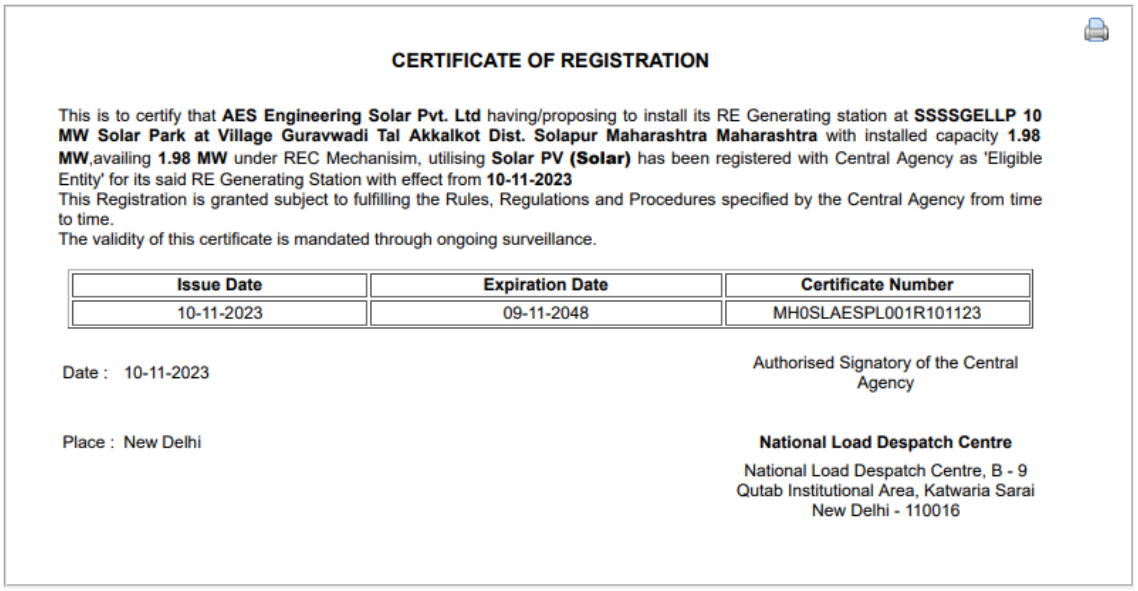
Expected generation of the Betterworld Solar Farm over a 20-year period.

7 Export & Sale of Electricity

Electricity exported by the solar farm is sold to the Indian grid for use by Indian consumers.

Electricity generated by the plant is sold through a Power Purchase Agreement. No such declaration of 'green energy', or reference to the generation being renewable or zero-carbon is made within the contract in order to prevent any customer from claiming this as zero carbon on a market-basis under ISO 14064-1. AESEngineering Solar Private Limited receives a monthly open access meter consumption report from the Maharashtra State Electricity Distribution Company Ltd. which details the amount of electricity that has been exported to the grid from the Betterworld Solar Farm.

Furthermore, AESEngineering Solar Private Limited will obtain and retain Renewable Energy Certificates relating to the generation. This is for the purposes of both ensuring that no other entity is able to count the generated electricity as renewable, whilst also serving as further documented evidence for the project.



CERTIFICATE OF REGISTRATION

This is to certify that **AES Engineering Solar Pvt. Ltd** having/proposing to install its RE Generating station at **SSSSGELLP 10 MW Solar Park at Village Guravwadi Tal Akkalkot Dist. Solapur Maharashtra Maharashtra** with installed capacity **1.98 MW**,availing **1.98 MW** under REC Mechanisim, utilising **Solar PV (Solar)** has been registered with Central Agency as 'Eligible Entity' for its said RE Generating Station with effect from **10-11-2023**
This Registration is granted subject to fulfilling the Rules, Regulations and Procedures specified by the Central Agency from time to time.
The validity of this certificate is mandated through ongoing surveillance.

Issue Date	Expiration Date	Certificate Number
10-11-2023	09-11-2048	MH0SLAESPL001R101123

Date : 10-11-2023

Authorised Signatory of the Central Agency

Place : New Delhi

National Load Despatch Centre
National Load Despatch Centre, B - 9
Qutab Institutional Area, Katwaria Sarai
New Delhi - 110016

Certificate of registration for the project as a RE Generator.

The project may be viewed publicly on the website of the Renewable Energy Certificate Registry of India, under Registered RE Generators under the name of AESEngineering Solar Pvt. Ltd.

8 Local Impact & Stakeholder Engagement

8.1 Previous Land Use

The land under which the solar farm is installed was previously unoccupied, the total area of land under use is approximately 7.457 acres (0.0302 km^2). A soil survey carried out prior to installation indicated that the soil consists of coarse gravels at depths of 1 – 2 m, with weathered or highly weathered rock at depths of 2 – 5 m. At the time of the survey (July), no groundwater was encountered during the borehole drills down to a depth of 5 m.

8.2 Local Engagement

Local stakeholder engagement was carried out for the wider installation, not specific to the Betterworld Solar Farm. As a result, this stakeholder engagement was carried out by Variate Consultants PVT Ltd. with the local community.

Variate engaged with the local authority of Guravwadi village, which is the nearest settlement to the wider installation and is located approximately *1 km* from the installation. As part of this dialogue and engagement, Variate obtained a no objection certificate from the Gram Panchayat of Guravwadi village. An annual meeting of the Gram Panchayat takes place to highlight and discuss any issues that may arise.

9 Additionality & Risks

9.1 Additionality

A key aspect of any GHG project is that of additionality, this will be discussed in relation to *ACM0002* within this report. Ultimately any offset needs to be a true reflection of the genuine impact that a GHG project has had in terms of the carbon dioxide emissions had that project not taken place. Even if an installation or site prevents the emission of carbon dioxide, it is only a genuine offset if this prevention would not have occurred regardless of the project. The requirement of additionality also means that projects which would be undertaken for reasons other than reducing GHG emissions cannot be considered offsets.

A.E.S Engineering Ltd. and AESEngineering Solar Private Limited held no legal or regulatory obligation to carry out this undertaking, and neither entity has received any public funding or financial incentive to do so.

AES is primarily a manufacturing business. The primary activity being the manufacture and sale of mechanical seals and seal support systems for rotating equipment, the company does also own certain entities working in preventative maintenance and conditional monitoring. The creation of, and involvement in the power sector is an entirely new venture for the business that is completely outside of normal business activity. AESEngineering Solar Private Limited is an entirely new entity created for the purposes of this project.

AES is not able to use the electricity generated by the Betterworld Solar Farm to reduce its own electricity bills for financial gain, either at its location in Pune, India or at any other AES location. As further evidence to this, AESEngineering Solar Private Ltd. has also foregone the opportunity to market and sell generated electricity as ‘green’ or ‘renewable’ to increase revenue. This decision has been made to fully ensure that there is no possibility of double counting of the GHG impact of this project.

9.2 Long-term Risks

Another key consideration of any GHG project that aims to create offsets through either GHG removals or GHG emissions reductions is the risk of reversal. Reversal in this case referring to a change in circumstances which causes any previously claimed offset to be no longer valid. This GHG project does not rely upon any means of sequestration or storing GHG emissions within a GHG sink, as a result there is no risk of a reversal occurring.

The long-term risk to the GHG benefit of this project is therefore the gradual improvement in the carbon-intensity of the Indian grid. As the carbon-intensity of the Indian grid improves, the GHG benefits of this project naturally reduce as the energy being displaced by the project no longer has as many GHG emissions associated with it. However, this is not a reversal and does not pose any risk of double-counting or misleading claims. Ultimately should this occur, and the GHG project no longer carries any environmental benefit in terms of GHG impact, then this means that a large-scale national grid has been greened. The term ‘risk’ in this context only refers to the possibility of GHG emission reductions from this project falling over time, not to any negative aspect or connotation with regards to the aims of the project at large.

10 GHG Emissions Reductions

10.1 Summary

The calculation used will be that of a comparison to the baseline of the Indian Grid. The generation of carbon-free energy for supply to the Indian Grid therefore supplants the use of electricity from the Indian grid at a higher carbon intensity. This carbon intensity is taken to be the weighted average emissions factor of the Indian Grid, in this case the 'operating margin'. GHG emissions reductions in any given timeframe are therefore the product of the generation of the GHG project within that timeframe and the weighted average emissions factor for the grid.

The process of monitoring and calculating GHG emission reductions will align with the frequency and quality of data available relative to the baseline of the Indian grid. As such, this will be conducted on an annual basis such that the most recent weighted average emissions factors of the Central Electricity Authority may be used to best reflect the true value of GHG emissions reductions.

The baseline for this project is the emissions from thermal power plants in the Indian Grid, the baseline period for this GHG project is to be a dynamic baseline. It is not fair and credible to take a static baseline for his project as it is not reasonable to assume that both the generation and emissions of the Indian Grid will remain constant over the duration of the project. An increase in the share of carbon-free generation such as wind, solar or nuclear within the Indian power sector will result in a fall in the weighted average emissions factor. Over time, in order to meet emissions reductions targets or as a result of outside investment, it is expected that the weighted average emissions factor will fall.

Calculation will be based upon the key parameters of project generation (kWh) and weighted average emissions factor kg CO_2/kWh. The weighted average emissions factor will be sourced from the most recent CEA calculations available. Also to be reported are the total generation and emissions of the Indian Grid, this is not calculated by the GHG project proponent but sourced directly from the CEA. This will be reported solely for informative purposes to provide a comparison to the GHG emissions reductions reported by the project.

10.2 GHG Sources, Sinks, and Reservoirs

This GHG project is a simple calculation in terms of GHG emissions reductions in comparison to GHG projects which make an impact through GHG removals, such as afforestation projects. However, in order to properly ensure that the true impact on GHG emissions is properly reported it is necessary to take a wider view of the project in terms of any additional unforeseen impacts it may have.

To do so requires considering the project in terms of GHG sources, sinks, and reservoirs. Sources refer to any process that releases a greenhouse gas into the atmosphere, sinks refer to any process that removes a greenhouse gas from the atmosphere, and a reservoir refers to any component other than the atmosphere that has the capacity to accumulate greenhouse gases and store or release them. It is then necessary to consider how these sources, sinks, and reservoirs are either directly changed by the GHG project or are indirectly related or affected by the GHG project.

Any greenhouse gas sources, sinks, or reservoirs controlled by the project are those situated directly on-site within the project boundary. These being: any process occurring on-site involving combustion of a fuel, any process occurring on-site involving anaerobic digestion, any process on-site involving the use of fluorinated gases, and any biological carbon stock on-site and changes to it.

For the case of the solar farm, there are no sources, sinks, or reservoirs within the boundary of the project. There is no combustion of fuels, there is no significant flora or biomass on-site which would either capture carbon dioxide or pose a risk of reversal.

The criteria around affected or related GHG sources, sinks, or reservoirs concern any material and energy flows into and out of the project site. In the case of the solar farm, the only flow into or out of the site consists of the interconnection with the wider Indian grid. As a source of generation, and with no load, energy will only flow out of the physical site boundary. As such, the only relevant GHG source to this project is the GHG source of emissions from thermal power plants within the Indian National Grid.

It is on this basis that the primary benefit of the project is determined, as the energy generated by the GHG project influences the amount of GHG emissions that would need to occur from its thermal power stations. The influence of the GHG project is that for a given level of demand, fewer emissions would occur as there is less generation required of the thermal power plants of the Indian grid.

The only further complication to this approach is the unforeseen impacts that this increase in generation may have in terms of overall demand levels. It is possible that there is potential for the sale of electricity from this project to influence market supply (and therefore demand) for electricity which in turns influences generation from thermal plants in manner which alters the baseline. This is discussed later when considering the GHG baseline for this project.

11 Calculating GHG Emissions Reductions

11.1 Determination of the GHG Baseline

The GHG Baseline is the scenario that is considered to exist in absence of the project taking place. Considering the project in question and the sources, sinks, and reservoirs that it either influences or controls, the absence of the project would continue to be the conditions (particularly the carbon intensity) of the Indian grid.

Accordingly, the GHG baseline of the project is considered to be the most recent information on the Indian grid. The GHG baseline is therefore a dynamic baseline and will be updated as and when the most recently available information is published on the generation, fuel mix, and carbon intensity of the Indian grid. The publication of the CO_2 database by the Central Electricity Authority is considered to be the most reliable and accurate source of data on which to establish the GHG baseline.

The previously identified complication of the related impact on thermal power plants from an increase in market supply is not considered significant enough to be relevant to the baseline. The scale of the project, being only 2 MW of AC connected load, means that its wider impact on the electricity market in India is considered negligible. The year one generation of 3,716,020 kWh of the GHG project compares to annual generation (in that same year) of the Indian Grid of 1,487,827 GWh. Thus, it is not realistic for there to be any change in demand pattern as a result of the increase in supply represented by this project. The generation of carbon-free energy for supply to the Indian Grid therefore supplants the use of electricity from the Indian grid at a higher carbon intensity. Accordingly, the creation of the project is assumed to have made no impact to the GHG baseline of the Indian grid.

11.2 Calculation of GHG Emissions Reductions

GHG Emissions reductions are to be calculated and reported in terms of tonnes of carbon dioxide equivalent. The quantity of GHG Emission Reductions (Tonnes) during any given time period is the product of the energy generated by the project (kWh) and the applicable emissions factor (kg CO_2/kWh) for that time period.

Within the context of calculating GHG emissions reductions the following terms are relevant:

- G_R is the certified GHG Emissions Reductions in tonnes.
- E_R is the emissions factor including renewables and imports in kg CO_2/kWh.

- O_E is the generated output of the plant during the time period in kWh.

E_R is the emissions factor of the Indian Grid in units of *kg CO_2/kWh*. This figure is to be sourced from the document: '*Central Electricity Authority: CO_2 Baseline Database'*, as published by the *Central Electricity Authority* of India. The figure to be taken as E_R is the *'Weighted Average Emission Factor (for net effective injection into grid)'* including imports. This figure corresponds to the financial year of the 1st of April to the 31st of March, as in 2021-22 refers to E_R for the months of April 2021 to March 2022 inclusive. Versions of the database are available for download from the Central Electricity Authority website: *[https://cea.nic.in/cdm-co2-baseline-database/?lang=en].* The applicable emissions factor is to be the weighted average (including renewables) factor from the relevant publication from the CEA, or the most recent factor available should the time period be more recent than the most recent published factor period.

O_E is the exported generation of the Betterworld Solar Farm. This figure is to be sourced from the '*Open Access Meter Consumption Report'* as provided to the project proponent by the '*Maharashtra State Electricity Distribution Company Ltd.'.* Within this document the '*Export Units (KWH)'* figure is to be taken as O_E.

This is the exported generation of the Betterworld Solar Farm as measured by the export meter within the shared switchyard. This figure is taken instead of the plant generation itself at the inverter level as this allows for transmission and line loss within the solar farm itself. This transmission and line loss within the Betterworld solar farm is approximately 1.5% of plant generation as measured at the inverter level.

The formula for the calculation of any GHG emissions reductions in any given month is:

$$G_R = \frac{E_R \times O_E}{1000}$$

The CEA aggregates data and calculates intensity figures for the period of April 1st to March 31st for each year and publishes these results the following September or October. As such the reporting period for the project runs across two publications financial years and thus two values of E_R. To make the most accurate and fair calculation of GHG emissions reductions a separate calculation will be made for each month during the reporting period, and the total GHG emissions reductions for the reporting period is to be the sum of each individual month. The value of E_R used for each month is to be the factor relevant to the financial year in which that month falls, this means that E_R will vary from

March to April during each reporting period. As such the calculation for GHG emissions reductions is now.

$$G_{R,y} = \sum_{m=1}^{12} \frac{E_{R,m} \times O_{E,m}}{1000}$$

Where:

$G_{R,y}$ is the certified GHG Emissions Reductions in Tonnes in the reporting period y.

$E_{R,m}$ is the emissions factor including renewables and imports in kg CO_2/kWh for the month m, should there be no published emissions factor available for the month m the most recent emissions factor is to be used in its place.

$O_{E,m}$ is the generated output of the plant for the month m.

In practice, as will be discussed later on, the value of $E_{R,m}$ will often be uniform across the time period due to the lag in reporting on data from the Central Electricity Authority.

12 Comparison to Approved Methodologies

12.1 Comparison To Approved Methodologies

The core premise of the methodology for this GHG project is based upon that of an existing methodology, the *Clean Development Mechanism: Grid-connected electricity generation from renewable sources (ACM0002),* as published by the *United Nations Framework Convention on Climate Change.*

The Betterworld Solar farm methodology as previously detailed complies with ACM0002 as discussed within this section.

12.1.1 Scope and Applicability

Typical projects	Retrofit, rehabilitation (or refurbishment), replacement or capacity addition to an existing power plant or construction and operation of a new power plant/unit that uses renewable energy sources and supplies electricity to the grid. Battery energy storage system can be integrated under certain conditions
Type of GHG emissions mitigation action	Renewable energy: Displacement of electricity that would be provided to the grid by more-GHG-intensive means

Methodology key elements of ACM0002.

ACM0002 was developed and is applicable to grid-connected renewable energy generation projects including both construction and operation of a greenfield power plant or the retrofitting, rehabilitation, or expansion in capacity of an existing power plant.

12.1.2 Baseline Scenario

The baseline scenario of any project is assumed to be the continuation as normal of the electricity grid in absence of the project.

Baseline scenario for Greenfield power plant

If the project activity is the installation of a Greenfield power plant with or without a BESS as described under paragraph 4(a) or paragraph 5(a), the baseline scenario is electricity delivered to the grid by the project activity that would have otherwise been generated by the operation of grid-connected power plants and by the addition of new generation sources, as reflected in the combined margin (CM) calculations described in TOOL07.

Identification of the baseline scenario as per ACM0002.

Within ACM0002, the baseline emissions are then to be calculated as the product of net generation fed into the grid and the emissions factor for grid connected power generation:

Baseline emissions include only CO_2 emissions from electricity generation in fossil fuel fired power plants that are displaced due to the project activity. The methodology assumes that all project electricity generation above baseline levels would have been generated by existing grid-connected power plants and the addition of new grid-connected power plants. The baseline emissions are to be calculated as follows:

$$BE_y = EG_{PJ,y} \times EF_{grid,CM,y} \qquad \text{Equation (11)}$$

Where:

BE_y	=	Baseline emissions in year *y* (t CO_2/yr)
$EG_{PJ,y}$	=	Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the CDM project activity in year *y* (MWh/yr)
$EF_{grid,CM,y}$	=	Combined margin CO_2 emission factor for grid connected power generation in year *y* calculated using TOOL07 (t CO_2/MWh)

Calculation of baseline emissions as per ACM0002.

As per ACM0002, the Betterworld Solar farm being a greenfield power plant as opposed to a retrofit or rehabilitation of an existing power plant, the baseline alternative scenario may be considered as the use of grid supplied electricity. Whereas in more complex (from an additionality perspective) projects need to consider alternative scenarios for what may be replacing the project, as the Betterworld Solar farm is entirely new this need not be considered.

12.1.3 Additionality

Within ACM0002, projects may be assessed for additionality according to the additional *TOOL01: Tool for the demonstration and assessment of additionality*. This tool provides a five-step process for demonstrating the additionality of any project adhering to ACM0002, these five steps being:

0) **Demonstration whether the proposed project activity is the first-of-its-kind;**

In cases where a GHG project is the first of its kind demonstrating a new technology it may be considered additional without the additional steps, the Betterworld Solar Farm does not fall within this description and as such the following steps are considered.

1) **Identification of alternatives to the project activity:**

This step considers alternatives to the project being carried out as is. In this case, this would be the continuation of the current situation in which there would be no displacement of grid power and an equivalent amount of carbon dioxide would continue to be emitted to the environment. Such an alternative scenario (continuation as is) is compliant with all applicable legal and regulatory requirements, meaning that the creation of the Betterworld Solar farm as an alternative to the baseline has not been the result of legal or regulatory requirements. As such, within *TOOL01* the project is considered additional and either one of steps 2 or 3 may be carried out.

2) Investment analysis:

This step is to determine whether the project is economically or financially viable without the benefit of receiving GHG Emissions Reductions. Note that this is a case of deviation between this methodology and ACM0002, as AES is not intending to register this project within the clean development mechanism. Within ACM0002 this step is present in order to prevent projects carried out for financial reasons from simply being classified as CDM projects for further financial or public relations gain.

For the case of the Betterworld Solar Farm, AES is not selling any certified emissions reductions to third parties for additional revenue, and as such the step of investment analysis is largely redundant. However, the principles of this step have still been adhered to in that AES can demonstrate that the Betterworld Solar Farm was carried out for the purposes of creating GHG Emissions Reductions and not for financial gain.

The Betterworld Solar Farm does generate revenue through the sale of electricity to the Indian Grid. With the capital cost of the Betterworld Solar Farm, expected revenue, expenses, and tax the expected payback of the project is approximately *14* years. Well outside the 8-year maximum payback requirement needed to meet the threshold for investment as per the *AES Investment Policy to Prevent Global Warming*.

3) Barriers analysis:

Not applicable as step 2 has been carried out.

4) Common practice analysis:

Although photovoltaic power generation projects in India are in existence, they are not the common practice for generation within the Indian grid. Of the 1601 generating units above *25 MW* identified within version 19 of the *CO2 Baseline Database,* none are

photovoltaic power generation. Similar small scale renewable generation not considered within the CEA has been carried out for the purposes of compliance with the CDM under ACM0002.

12.1.4 Project Emissions

For the case of photovoltaic power generation, there are no emissions from the project that need to be considered as per ACM0002.

12.1.5 Leakage

As per ACM0002, the emissions potentially arising due to activities such as power plant construction and upstream emissions from fossil fuel use may be considered negligible.

12.1.6 Emissions Reductions

Emissions reductions are then calculated to be the difference between the baseline emissions in a given year and the project emissions within that same year. For the case of photovoltaic power generation, there are zero project emissions and the emissions reductions are therefore simply the product of net generation fed into the grid and the emissions factor for grid connected power generation.

12.2 Comments and Critique of Methodology

AES believes that this methodology of calculating GHG emissions reductions is conservative in nature, particularly in comparison to widely used and recognised methodologies such as the UN Clean Development Mechanism.

The Betterworld Solar Farm is by no means a unique endeavour. There are a huge quantity of GHG projects which produce GHG emissions reductions through the use of renewable energy generation, many of which are also located in India. Many of these schemes (particularly those registered as VERRA or Gold Standard projects) utilise the aforementioned Clean Development Mechanism: ACM0002 – Grid-connected electricity generation from renewable sources. The Betterworld Solar Farm follows the same principles of this methodology in that GHG emissions reductions are the product of the emissions factor of the grid and the exported generation of the project.

However, the methodology outlined within this document is aimed to be overly conservative in comparison to this UN approved methodology. ACM0002 allows project proponents to use a higher emissions factor than that of the weighted average emissions rate used by AES.

6 User Examples

This section provides two illustrative examples of how the CO_2 Database can be applied. The examples are based on hypothetical renewable energy projects

Project A is a grid-connected 5 MW small hydropower station located in the State of Assam. The station will be commissioned in 2023. Annual net generation is projected at approx. 17'500 MWh.

- The project qualifies as a small-scale CDM activity since its capacity is below the 15 MW threshold. Hence it will use the latest version of CDM methodology AMS-I.D for grid-connected renewable electricity generation.
- Methodology AMS-I.D gives two options for determining the baseline emission factor: Either the weighted average emissions, or the combined margin of the grid. In this example, it is assumed that the promoters choose the weighted average option. In addition, it is assumed that the promoters choose to adjust the weighted average emission factor for electricity imports, even though this is not mandatory under AMS-I.D.
- In the PDD, the expected emission reductions achieved by the hydro station are projected based on the expected annual generation, and the import-adjusted weighted average emission factor (excluding renewal energy generation) for the Indian Grid in the most recent year for which data is available (2021-22). The corresponding value is 0.81 t CO_2/MWh. Hence the absolute emission reductions are projected at 0.81 * 17'500 = 14,175 t CO_2/yr. The emission reductions are equal to the baseline emissions, since the project does not result in greenhouse gas emissions of its own.

Excerpt from the UN CDM Tool to calculate the emission factor for an electricity system. Demonstrating principles of calculation and the allowance of higher combined-margin emissions factors.

Thus, through using ACM0002, a project proponent is able to use the higher build-margin or combined-margin emissions factors as opposed to the weighted average emissions rate (including renewables), which is the best reflection of the carbon intensity of the Indian grid at the time of consumption. These higher emissions factors attempt to also account for the construction of future power stations that may be prevented through the construction of the GHG project.

AES will make no attempt to claim this benefit of the project, believing it is not truly reflective of the reduction in emissions that are actually occurring as a result of the project at the time at which they would have otherwise occurred. For example, in version 20 of the CEA publication on the CO2 baseline, the following emission factors were reported:

Emission Factors (tCO2/MWh) (incl. Imports)	2023-24
Simple Operating Margin (1) (2)	0.962
Build Margin (not adjusted for imports)	0.552
Combined Margin (1) (2)	0.757

Weighted Average Emission Factor (for net effective injection into grid)	**0.727**

AES therefore believes that the methodology outlined within this document is a more accurate reflection of the true GHG benefit of the GHG project in comparison to the UN Clean Development Mechanism.

Furthermore, it should also be noted that data on full GHG emissions including Nitrous Oxide and Methane is not available, the Central Electricity Authority only calculates and reports CO_2 emissions. In keeping with the principles of conservative calculation, no attempt has been made within this document to estimate the additional CO_2e reductions as a result of the reduced emissions of N_2O and CH_4. Exclusion of both N_2O and CH_4 is also permissible under ACM0002 as a minor emissions source.

13 Expected GHG Emissions Reductions

This section makes an estimate on the expected GHG emissions reductions of the project under the methodology outlined within this document. To do so necessitates making future assumptions on the carbon intensity of the Indian grid. Future investment in nuclear or natural renewable energy power stations will lead to a fall in the carbon intensity of the grid, whilst an increase in the percentage of energy generated through thermal power stations such as coal or natural gas will have the opposite effect.

Emission Factors (tCO2/MWh) (incl. Imports)	2019-20	2020-21	2021-22	2022-23	2023-24
Weighted Average Emission Rate (2)	0.713	0.703	0.715	0.716	0.727

Weighted average emission rates of the Indian grid over time.

At the time of writing, there has been very little change in the carbon intensity of the grid for a period of four years, however it is expected that future investment either by the Indian government or external sponsorship will cause this to fall. As a result, an estimate of a *1%* year-on-year fall in the emissions factor is used for the purposes of this estimation.

Year	Expected Generation (kWh)	Expected EF	CO_2 (Tonnes)
1	3,716,020	0.71350	2,651.4
2	3,604,539	0.70637	2,546.1
3	3,581,110	0.69930	2,504.3
4	3,557,832	0.69231	2,463.1
5	3,534,706	0.68539	2,422.6
6	3,511,731	0.67853	2,382.8
7	3,488,905	0.67175	2,343.7
8	3,466,227	0.66503	2,305.1
9	3,443,696	0.65838	2,267.3
10	3,421,312	0.65179	2,230.0
11	3,399,074	0.64528	2,193.3
12	3,376,980	0.63882	2,157.3
13	3,355,029	0.63244	2,121.8
14	3,333,222	0.62611	2,087.0
15	3,311,556	0.61985	2,052.7
16	3,290,031	0.61365	2,018.9
17	3,268,645	0.60752	1,985.8
18	3,247,399	0.60144	1,953.1
19	3,226,291	0.59543	1,921.0
20	3,205,320	0.58947	1,889.4

14 Reporting GHG Emissions Reductions

14.1 Reporting Period

AES will report on the GHG emissions reductions produced by the project on an annual basis, with reporting being carried out on a timeframe of the 1st of October to the 30th of September (inclusive). This time period has been chosen to align with the reporting period of the GHG inventory produced by A.E.S Engineering Ltd. and verified to ISO 14064-1.

14.2 Reporting Method

AES will carry out the calculation of GHG emissions reductions for the period of 1st of October to 30th of September on an annual basis. A 'GHG Emissions Reduction' report will be produced annually detailing these calculations and all supporting information as outlined within this methodology report.

The GHG Emissions Reduction report will be made publicly available on the website of AESSEAL UK. AES will publish this report within 12 months of the end of the reporting period of the 1st of October to the 30th of September.

14.3 Reported Parameters

The primary reported measure within the GHG Emissions Reduction report is to be the value of GHG emissions reductions in tonnes of carbon dioxide equivalent. In order to carry out effective monitoring of the project and its performance, certain parameters will be regularly monitored and measured. These parameters are those that are relevant to the project, and to the baseline against which it is compared.

Parameter	Unit Of Measure	Purpose
Exported Energy	kWh	Calculate GHG Emission Reductions
Plant Generation	kWh	Monitor Project Performance
Indian Grid Capacity	MW	Monitor Baseline Scenario
Indian Grid Generation	MWh	Monitor Baseline Scenario
Indian Grid Emissions	Tonnes CO_2	Monitor Baseline Scenario
Indian Grid Intensity	kg CO_2/kWh	Calculate GHG Emission Reductions

14.3.1 Exported Energy

This figure (O_E) is to be sourced from the '*Open Access Meter Consumption Report*' as provided to the project proponent by the '*Maharashtra State Electricity Distribution*

Company Ltd.'. The GHG Emissions Reductions report will list this parameter for each month within the reporting period.

14.3.2 Plant Generation

This refers to the generated electricity at the inverter level by the Betterworld solar farm in kWh. This parameter is not used in any calculation of GHG emissions reductions, however it will still be reported for each month that falls within the reporting period. Remote and live monitoring of the site is available and is accessible through a web-based portal (SuryaLog). Through use of the SuryaLog portal it is possible to monitor daily generation totals from each inverter as well as the plant total.

It should be noted that the invoiced amount of generation does not match the total generation of the plant on a monthly basis. Due to the terms and conditions of the contract, AESEngineering Solar Private Limited only receives payment for exported generation following the deduction of transmission and distribution losses. The SuryaLog platform monitors generation at the inverter level, at the point of DC to AC conversion. Whilst this is a very useful tool for the purposes of monitoring performance and verifying generation figures, the calculation of GHG emission reductions should only be carried out on the basis of export meter figures to properly represent the energy flows out of the GHG project. The exported energy of the project is approximately *1.5%* less than the generation at the inverter level.

14.3.3 Indian Grid Capacity

Data and figures relating to the Indian grid are sourced from the Central Electricity Authority, from the *'Central Electricity Authority: CO_2 Baseline Database'*. The CEA considers all generation, private or public, that is grid-connected and has an installed capacity of *25 MW* or greater. Small-scale and off-grid generation is not considered. For example, in the September 2022 release (Version 18) 554 power stations were included in the data. The GHG Emissions Reduction report will include the total grid capacity as reported by the CEA for any version of the report which falls within the reporting period.

14.3.4 Indian Grid Generation

The CEA collects data on generation from each of the stations included in the data, and further breaks this down by individual units at each station (if applicable). In certain cases if data is not available conservative assumptions are made, for example the CEA was only able to collect gross generation figures from Hydro plants and has therefore taken a standard assumption of auxiliary power consumption to be 0.5% to derive net generation. In Version 18 (published September 2022), for the first time the CEA included renewable energy sources in its generation and subsequent calculation of intensity. The

GHG Emissions Reduction report will include the total grid generation as reported by the CEA for any version of the report which falls within the reporting period.

14.3.5 Indian Grid Emissions

The CEA utilises data collected for generation, as well as the fuel consumption and gross calorific value of fuel for its thermal power stations to make a calculation of emissions:

$$AbsCO_2(station)_y = \sum_{i=1}^{2} FuelCon_{i,y} \times GCV_{i,y} \times EF_i \times Oxid_i$$

Where:

$AbsCO_2(station)_y$ is the absolute CO_2 emissions of the station in the fiscal year *y*.

$FuelCon_{i,y}$ is the amount of fuel of type *I* consumed in the fiscal year *y*.

$GCV_{i,y}$ is the gross calorific value of the fuel *I* in the fiscal year *y*.

EF_i is the CO_2 emissions factor of the fuel *I* based on gross calorific value.

$Oxid_i$ is the oxidation factor of the fuel *i.*

The total emissions of the grid are then the sum of the absolute emissions of each individual station. The GHG Emissions Reduction report will include the total grid emissions as reported by the CEA for any version of the report which falls within the reporting period.

14.3.6 Indian Grid Intensity

The GHG Emissions Reduction report will include the weighted average emissions rate (including renewables) as reported by the CEA for any version of the report which falls within the reporting period.

14.4 Incidents & Changes

The GHG Emissions Reduction report will also detail any incidents maintenance issues that have impacted the performance of the project during the reporting period.

15 Feedback & Contact Information

A.E.S Engineering Ltd. will continue to monitor and update this document should any changes occur to the GHG project that necessitate a change in methodology. A.E.S Engineering Ltd. welcomes any feedback or queries on the GHG project, and the methodology by which the GHG impact of this project is calculated.

If there are any queries regarding the Betterworld Solar Farm, please contact a member of the Business Assurance department:

- **Contact Address:** Global Technology Centre
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  Mill Close
  Rotherham
  South Yorkshire
  S60 1BZ
- **Contact Details:** +44 1709 369 966
  QADepartment@aesseal.com

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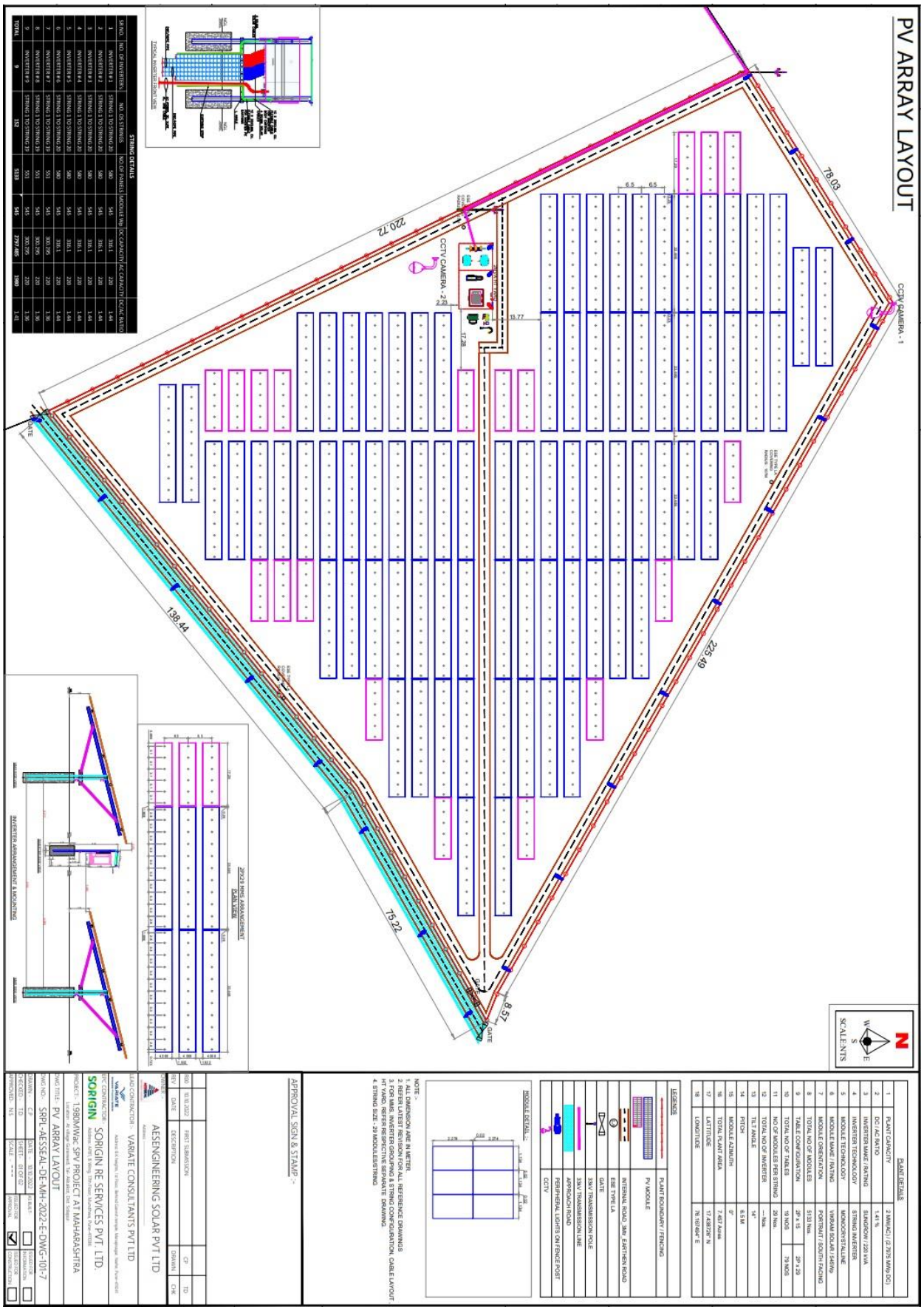
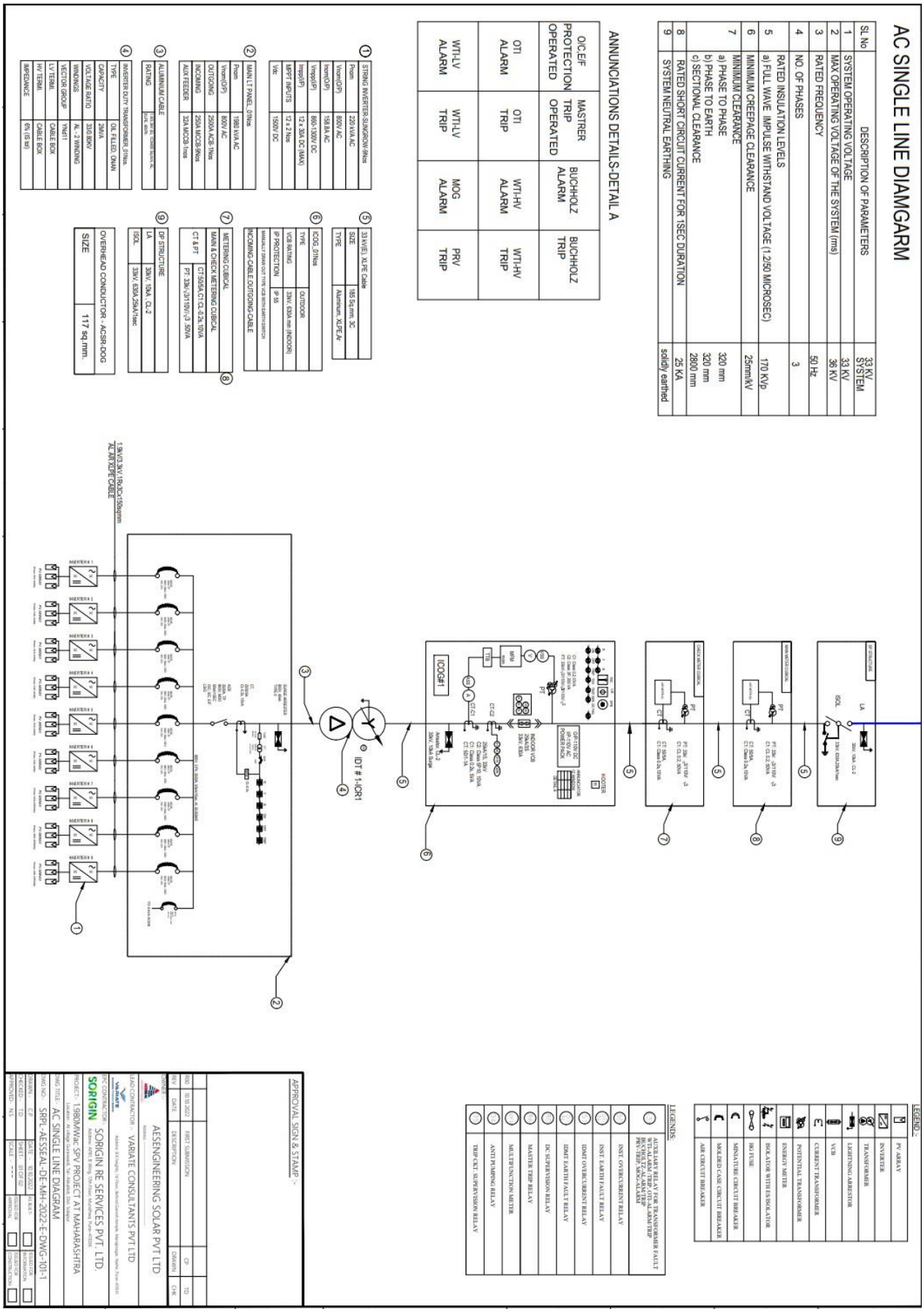
3	*Renewable Energy Certificate Registry of India, 2024, Registered RE Generators, https://www.recregistryindia.nic.in/index.php/publics/registered_regens*
4	*United Nations Framework Convention on Climate Change, 2022, CLEAN DEVELOPMENT MECHANISM ACM0002, https://cdm.unfccc.int/UserManagement/FileStorage/ZPFJL01OU2RYC6N3HASIXV7K84QBG9*
5	*United Nations Framework Convention on Climate Change, 2019, CLEAN DEVELOPMENT MECHANISM TOOL32, https://cdm.unfccc.int/methodologies/PAmethodologies/tools/am-tool-32-v2.0.pdf*
6	*AESSEAL plc, 2021, Investment Policy to Prevent Global Warming, https://static.aesseal.com/policy/bw/Investment-Policy_CJR%20Signature-06082021.pdf*

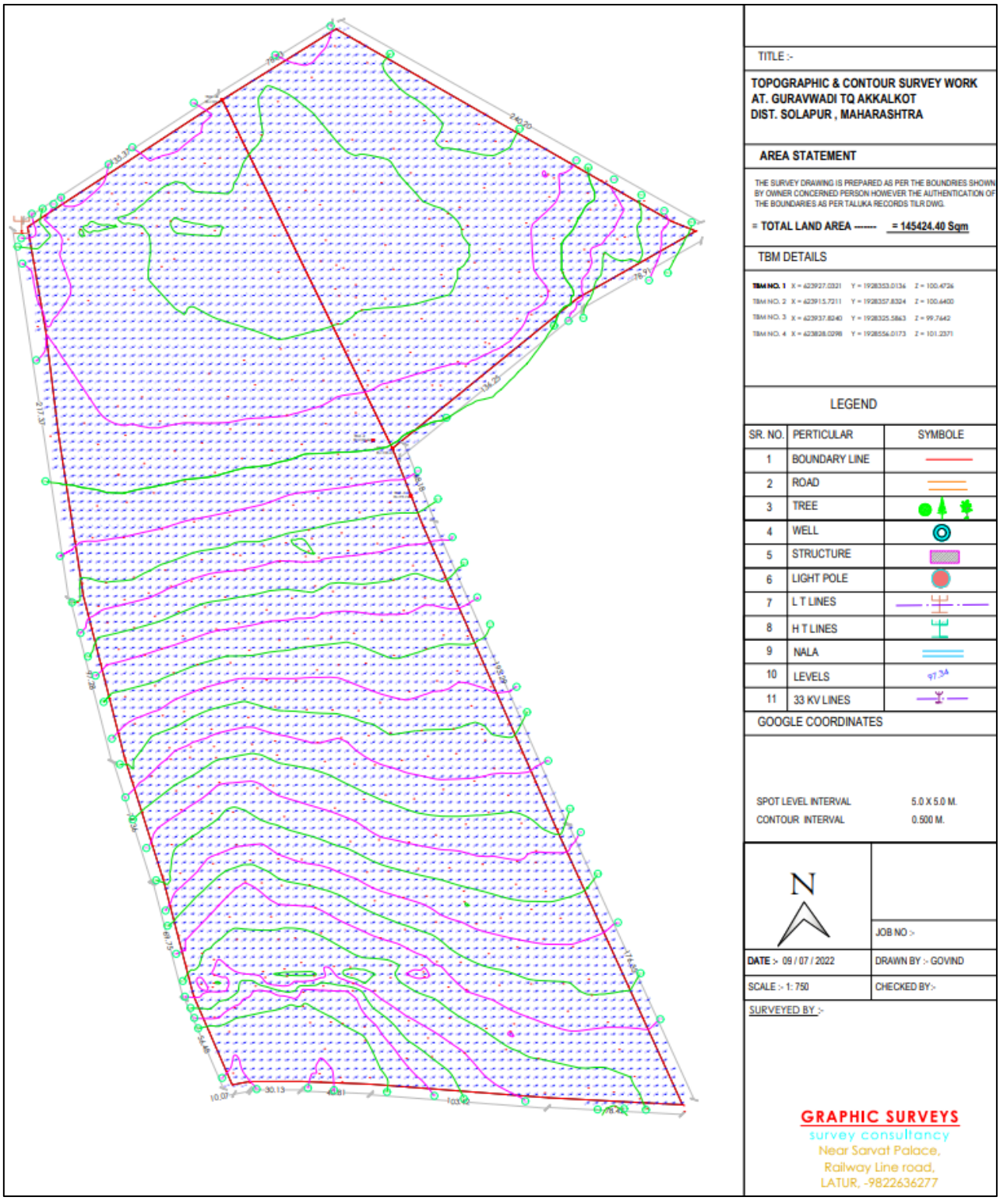
Appendix A: Solar Farm Layout



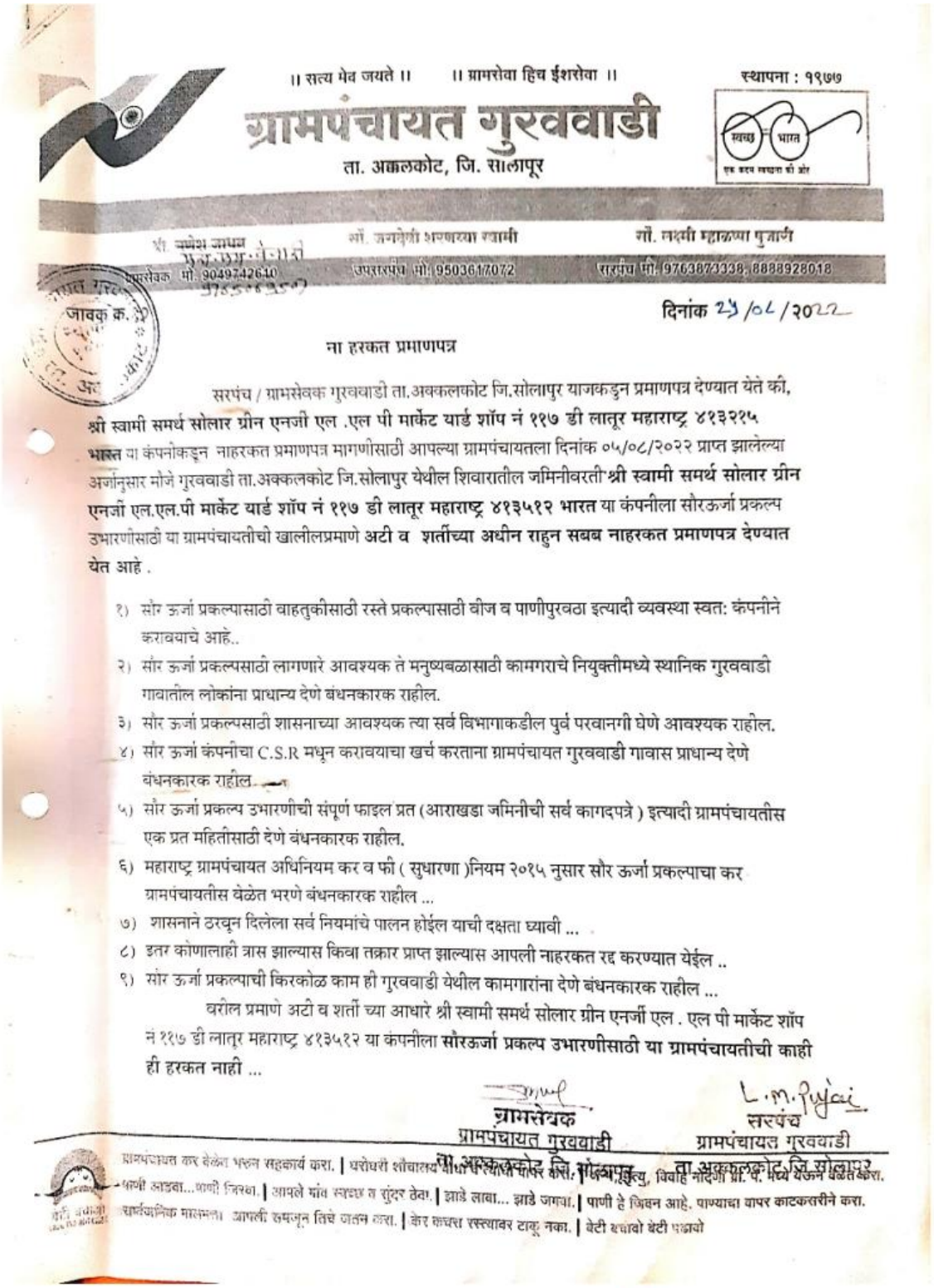
Appendix B: Solar Farm SLD



Appendix C: Solar Farm Topographic Survey



Appendix D: Guravwadi gram panchayat NOC



॥ सत्य मेव जयते ॥ ॥ ग्रामसेवा हिच ईशसेवा ॥ स्थापना : १९७७

ग्रामपंचायत गुरववाडी

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जावक क्र.

दिनांक 25/08/2022

ना हरकत प्रमाणपत्र

सरपंच / ग्रामसेवक गुरववाडी ता.अक्कलकोट जि.सोलापुर याजकडुन प्रमाणपत्र देण्यात येते की, **श्री स्वामी समर्थ सोलार ग्रीन एनर्जी एल .एल पी मार्केट यार्ड शॉप नं ११७ डी लातूर महाराष्ट्र ४१३२१५ भारत** या कंपनीकडुन नाहरकत प्रमाणपत्र मागणीसाठी आपल्या ग्रामपंचायतला दिनांक ०५/०८/२०२२ प्राप्त झालेल्या अर्जानुसार मौजे गुरववाडी ता.अक्कलकोट जि.सोलापुर येथील शिवारातील जमिनीवरती **श्री स्वामी समर्थ सोलार ग्रीन एनर्जी एल.एल.पी मार्केट यार्ड शॉप नं ११७ डी लातूर महाराष्ट्र ४१३५१२ भारत** या कंपनीला सौरऊर्जा प्रकल्प उभारणीसाठी या ग्रामपंचायतीचो खालीलप्रमाणे **अटी व शर्तीच्या अधीन राहुन सबब नाहरकत प्रमाणपत्र देण्यात येत आहे .**

१) सौर ऊर्जा प्रकल्पासाठी वाहतुकीसाठी रस्ते प्रकल्पासाठी वीज व पाणीपुरवठा इत्यादी व्यवस्था स्वत: कंपनीने करावयाचे आहे..

२) सौर ऊर्जा प्रकल्पसाठी लागणारे आवश्यक ते मनुष्यबळासाठी कामगराचे नियुक्तीमध्ये स्थानिक गुरववाडी गावातील लोकांना प्राधान्य देणे बंधनकारक राहील.

३) सौर ऊर्जा प्रकल्पसाठी शासनाच्या आवश्यक त्या सर्व विभागाकडील पुर्व परवानगी घेणे आवश्यक राहील.

४) सौर ऊर्जा कंपनीचा C.S.R मधुन करावयाचा खर्च करताना ग्रामपंचायत गुरववाडी गावास प्राधान्य देणे बंधनकारक राहील.

५) सौर ऊर्जा प्रकल्प उभारणीची संपूर्ण फाइल प्रत (आराखडा जमिनीची सर्व कागदपत्रे) इत्यादी ग्रामपंचायतीस एक प्रत महितीसाठी देणे बंधनकारक राहील.

६) महाराष्ट्र ग्रामपंचायत अधिनियम कर व फी (सुधारणा)नियम २०१५ नुसार सौर ऊर्जा प्रकल्पाचा कर ग्रामपंचायतीस वेळेत भरणे बंधनकारक राहील ...

७) शासनाने ठरवून दिलेला सर्व नियमांचे पालन होईल याची दक्षता घ्यावी ...

८) इतर कोणालाही त्रास झाल्यास किंवा तक्रार प्राप्त झाल्यास आपली नाहरकत रद्द करण्यात येईल ..

९) सौर ऊर्जा प्रकल्पाची किरकोळ काम ही गुरववाडी येथील कामगारांना देणे बंधनकारक राहील ...

वरील प्रमाणे अटी व शर्तो च्या आधारे श्री स्वामी समर्थ सोलार ग्रीन एनर्जी एल . एल पी मार्केट शॉप नं ११७ डी लातूर महाराष्ट्र ४१३५१२ या कंपनीला **सौरऊर्जा प्रकल्प उभारणीसाठी या ग्रामपंचायतीची काही ही हरकत नाही ...**

ग्रामसेवक
ग्रामपंचायत गुरववाडी
ता.अक्कलकोट जि.सोलापूर

L.M.Pujari
सरपंच
ग्रामपंचायत गुरववाडी
ता.अक्कलकोट जि.सोलापूर

ग्रामपंचायत कर वेळेत भरुन सहकार्य करा. | परोधरी शौचालय वापरा, त्याचा वापर करा. | पाणी हे जीवन आहे. पाण्याचा वापर काटकसरीने करा. | पाणी अडवा...पाणी जिरवा. | आपले गांव स्वच्छ व सुंदर ठेवा. | झाडे लावा... झाडे जगवा. | सार्वजनिक मालमत्ता आपली समजून तिचे जतन करा. | केर कचरा रस्त्यावर टाकू नका. | बेटी बचावो बेटी पढावो

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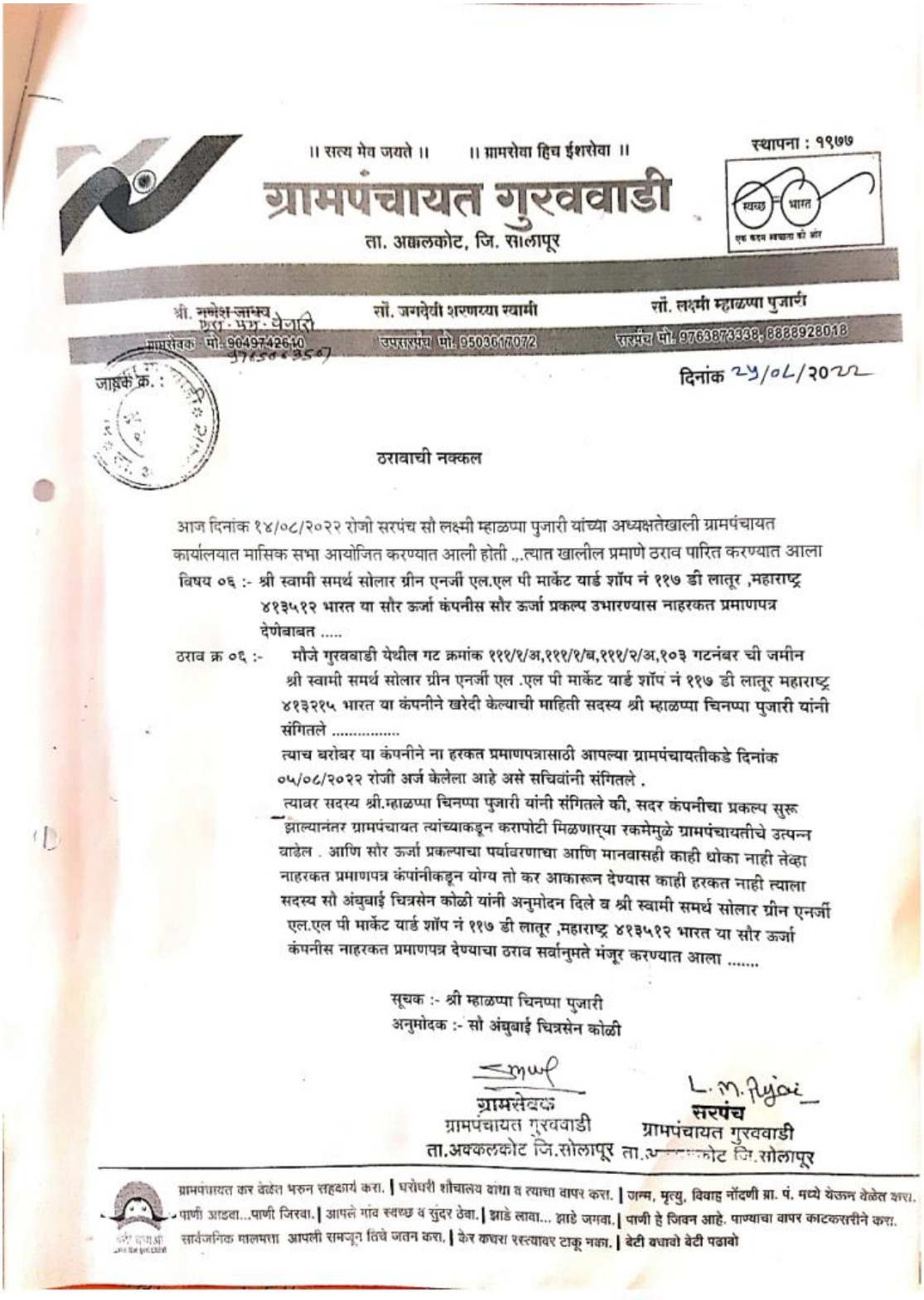

॥ सत्य मेव जयते ॥ ॥ ग्रामसेवा हिच ईशसेवा ॥ स्थापना : १९७७

ग्रामपंचायत गुरववाडी

ता. अक्कलकोट, जि. सोलापूर

श्री. [illegible] ग्रामसेवक मो. 9049742610 | सौ. जगदेवी शरणाप्पा स्वामी उपसरपंच मो. 9503617072 | सौ. लक्ष्मी म्हाळप्पा पुजारी सरपंच मो. 9763873438, 8888928018

जावक क्र. :

दिनांक २५/०८/२०२२

ठरावाची नक्कल

आज दिनांक १४/०८/२०२२ रोजी सरपंच सौ लक्ष्मी म्हाळप्पा पुजारी यांच्या अध्यक्षतेखाली ग्रामपंचायत कार्यालयात मासिक सभा आयोजित करण्यात आली होती ...त्यात खालील प्रमाणे ठराव पारित करण्यात आला

विषय ०६ :- श्री स्वामी समर्थ सोलार ग्रीन एनर्जी एल.एल पी मार्केट यार्ड शॉप नं ११७ डी लातूर ,महाराष्ट्र ४१३५१२ भारत या सौर ऊर्जा कंपनीस सौर ऊर्जा प्रकल्प उभारण्यास नाहरकत प्रमाणपत्र देणेबाबत .....

ठराव क्र ०६ :- मौजे गुरववाडी येथील गट क्रमांक १११/१/अ,१११/१/ब,१११/२/अ,१०३ गटनंबर ची जमीन श्री स्वामी समर्थ सोलार ग्रीन एनर्जी एल .एल पी मार्केट यार्ड शॉप नं ११७ डी लातूर महाराष्ट्र ४१३२१५ भारत या कंपनीने खरेदी केल्याची माहिती सदस्य श्री म्हाळप्पा चिनप्पा पुजारी यांनी संगितले .....

त्याच बरोबर या कंपनीने ना हरकत प्रमाणपत्रासाठी आपल्या ग्रामपंचायतीकडे दिनांक ०५/०८/२०२२ रोजी अर्ज केलेला आहे असे सचिवांनी संगितले .

त्यावर सदस्य श्री.म्हाळप्पा चिनप्पा पुजारी यांनी संगितले की, सदर कंपनीचा प्रकल्प सुरू झाल्यानंतर ग्रामपंचायत त्यांच्याकडून करापोटी मिळणाऱ्या रकमेमुळे ग्रामपंचायतीचे उत्पन्न वाढेल . आणि सौर ऊर्जा प्रकल्पाचा पर्यावरणाचा आणि मानवासही काही धोका नाही तेव्हा नाहरकत प्रमाणपत्र कंपांनीकडून योग्य तो कर आकारून देण्यास काही हरकत नाही त्याला सदस्य सौ अंबुबाई चित्रसेन कोळी यांनी अनुमोदन दिले व श्री स्वामी समर्थ सोलार ग्रीन एनर्जी एल.एल पी मार्केट यार्ड शॉप नं ११७ डी लातूर ,महाराष्ट्र ४१३५१२ भारत या सौर ऊर्जा कंपनीस नाहरकत प्रमाणपत्र देण्याचा ठराव सर्वानुमते मंजूर करण्यात आला .....

सूचक :- श्री म्हाळप्पा चिनप्पा पुजारी
अनुमोदक :- सौ अंबुबाई चित्रसेन कोळी

ग्रामसेवक
ग्रामपंचायत गुरववाडी
ता.अक्कलकोट जि.सोलापूर

सरपंच
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