



# 100 MW SOLAR PROJECT IN BHADLA IN RAJASTHAN.



Document Prepared by ALLCOT Group



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| <b>Project Title</b>                     | 100 MW SOLAR PROJECT IN BHADLA IN RAJASTHAN. |
| <b>Project ID</b>                        | VCS ID 1842                                  |
| <b>Project Start Date</b>                | 01-sep-2018                                  |
| <b>SD Contributions Reporting Period</b> | 16-sep-2018 to 31-March-2020                 |

|                      |  |
|----------------------|--|
| <b>Date of Issue</b> | 17-Feb-2021  |
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# 1 SUMMARY OF SUSTAINABLE DEVELOPMENT CONTRIBUTIONS

The purpose of this project is to generate electricity through solar energy and to supply it to the Rajasthan state electricity grid (Discom).

The project involves installation of 100 MWac solar power project in Bhadla in the state of Rajasthan, India.

- **Socio-economic well-being:** The project invests in technological resources for education. It also creates safe jobs for the youth.
- **Environmental well-being:** The project reduces the power grid's dependence on fossil fuels. Due to its zero emission the Project activity also contributes to tackling climate change and boosts the supply of renewable energy.

## 2 PROJECT CONTRIBUTIONS

The project's quantifiable contributions to specific targets and indicators of the Sustainable Development Goals (SDGs) for the SD contributions reporting period is detailed in following table. The official list of SDG Targets and Indicators provided by VERRA is used to identify the SDG Targets to which the project has contributed. Evidence for each contribution is identified in Appendix 1 below.

Table 1 : Sustainable Development Contributions

| Row number | SDG Target | SDG Indicator   | Net Impact on SDG Indicator        | Current Project Contributions  | Contributions Over Project Lifetime   |
|------------|------------|---|------------------------------------|--|---|
| 1.         | 7.2        | 7.2.1<br>Renewable energy share in the total final energy consumption                             | Implemented activities to increase | The project yielded a total net power generation of 318,858 MWh during the reporting period. The entirety of the production was consumed by grid users, therefore increasing renewable energy share in the total final energy consumption.   | The project has yielded a total net power generation of 318,858 MWh over its lifetime. The entirety of the production was consumed by grid users, therefore increasing renewable energy share in the total final energy consumption                               |
| 2.         | 8.6        | 8.6.1<br>Proportion of youth (aged 15–24 years) not in education, employment or training          | Implemented activities to decrease | During the last 5 years, 22 recent graduates in engineering, commerce and science have been hired (age <24). Among those, 21 since the launch of the project. Moreover, a mentoring program was developed to enhance their skills.           | During the last 5 years, 22 recent graduates in engineering, commerce and science have been hired (age <24). Among those, 21 since the launch of the project. Moreover, a mentoring program was developed to enhance their skills.                                |
| 3.         | 13.0       | Tonnes of greenhouse gas emissions avoided or removed   | Implemented activities to decrease | The project replaced anthropogenic emissions of greenhouse gases (GHG) of 298,718 tCO <sub>2</sub> e during the reporting period (16-sep-2018 to 31-March-2020)  | The project has replaced anthropogenic emissions of greenhouse gases (GHG) of 298,718 tCO <sub>2</sub> e over its lifetime  |
| 4.         | 8.8        | 8.8.1<br>Fatal and non-fatal occupational injuries per 100,000 workers, by sex and migrant status | Implemented activities to decrease | In the operations of the plants affiliated to project 1842, there have been no fatal and non-fatal occupational injuries during the reporting period. Moreover training sessions are held for workers. These sessions are held periodically. | In the operations of the plants affiliated to project 1842, there have been no fatal and non-fatal occupational injuries during the project's lifetime. Training sessions are held for workers to reduce the accident rate. These sessions are held periodically. |

# 1. APPENDIX 1: SUPPORTING EVIDENCE

- **Supporting evidence for contribution #1**

**Supporting evidence 1A:** Measurement of the first monitoring report. Total Net Power Generated (MWh)

## 6.2 Baseline Emissions

As per description earlier under this document:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

$EF_{grid,CM,y}$  : Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO<sub>2</sub>/MWh) (i.e., 0.93684 tCO<sub>2</sub>/MWh).

$EG_{PJ,y}$  : Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)

$BE_y$  : Baseline emissions in year y (tCO<sub>2</sub>e/yr)

Here,

| Monitoring Period:         | Total Net Power delivered to grid (MWh) | Baseline Emission Factor (tCO <sub>2</sub> e/MWh) | Total Emission Reduction (tCO <sub>2</sub> e/ year) |
|----------------------------|---|---|---|
| 16 Sep 2018 to 31 Oct 2018 | 0                                       | 0.93684   | 0   |

More information on the Total Net Power Generated (MWh) of the project can be found in the [final PD + Monitoring Report](#)

**Supporting evidence 1B:** Measurement of the second monitoring report. Total Net Power Generated (MWh).

## 5.1 Baseline Emissions

As per procedure established in the registered PD:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

$EF_{grid,CM,y}$  : Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO<sub>2</sub>/MWh) (i.e., 0.93684 tCO<sub>2</sub>/MWh).

$EG_{PJ,y}$  : Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)

$BE_y$  : Baseline emissions in year y (tCO<sub>2e</sub>/yr).

Here,

| Monitoring Period:                                      | Total Net Power Generated (MWh) | Baseline Emission Factor (tCO <sub>2</sub> /MWh) | Total Emission Reduction (tCO <sub>2</sub> / year) |
|---|---------------------------------|--|--|
| 01-Nov-2018 to 31-Mar-2020<br>(both the dates included) | 318,858.43                      | 0.93684  | 298,718  |

\* rounded down value has been considered.

More information on the Total Net Power Generated (MWh) of the project can be found in [Final Version of the second Monitoring Report \(2020\)](#)

● **Supporting evidence for contribution # 2**

Number of young graduates recruited per year

| Year        | Graduate Engineer Trainee | Management Trainee | Post graduate Engineer Trainee | Total |
|-------------|---------------------------|--------------------|--------------------------------|-------|
| 2018        | 5                         | 2                  | -                              | 7     |
| 2019        | 7                         | 1                  | -                              | 8     |
| 2020        | 4                         | 1                  | 1                              | 6     |
| Grand Total | 17                        | 4                  | 1                              | 21    |



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Avaada Energy and its project SPVs are committed to investing in attracting, developing, and retaining ambitious individuals who are dynamic and committed to excellence. We have provided employment opportunities to several fresh graduates from different educational backgrounds at both projects and corporate levels across departments.

The number of GET, PGET, and MT's hired since 2016 is provided hereunder:

| Year        | Graduate Engineer Trainee | Management Trainee | Post Graduate Engineer Trainee | Grand Total |
|-------------|---------------------------|--------------------|--------------------------------|-------------|
| 2016        | 1                         |                    |                                | 1           |
| 2017        |                           |                    |                                | 0           |
| 2018        | 5                         | 2                  |                                | 7           |
| 2019        | 7                         | 1                  |                                | 8           |
| 2020        | 4                         | 1                  | 1                              | 6           |
| Grand Total | 17                        | 4                  | 1                              | 22          |

We have an elaborate onboarding program for our MT/GET's as we are committed to a consistent induction program LEAP "Learn, Engage, Accomplish and Progress" in a way that our fresh employees can be introduced to the working environment and become familiar with the Avaada's culture and organization. The purpose is to ensure that all new employees are fully conversant with organizational objectives, operating philosophies and procedures, requirements of the job, rules and regulations governing work, and available employee benefits before the commencement of work. Also, they are assigned managers who mentor and guide them during the trainee period to shape their interests and help them grow in the organisation.

We also have a monthly check-ins system under which managers do a one-on-one session with each of the reportee to provide feedback, listen to the concerns, and articulate the expectations so that course corrections can be done in time and learning career growth is seamless.

Regards,  
  
 Praveen Golash  
 (Authorised Signatory)



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Note: This document's contents are solely to be used to arrive at a better understanding of Avaada Energy Pvt's initiatives, Ltd and its group companies, under VCS/Verra's Sustainable development contributions reporting requirements. The information relates to the following VCS Projects:

1. VCS project#1780: Solar Photovoltaic Project by Citraj Renewables Private Limited
2. VCS project #1842: 100 MW Solar Project in Bhadra in Rajasthan
3. VCS project #1844: 80 MW Solar by Farms Solar Farms Pvt. Ltd. - Chhattisgarh
4. VCS project #1914: 150 MW Solar Project in Karnataka by Avaada Solar

Click [here](#) for the pdf version of the official document

Source: Avaada Group, 2021

Note: The supporting evidence consolidates evidence at the company level.

- **Supporting evidence for contribution # 3**

**Supporting evidence 3A:** Measurement of the first monitoring report (2018) for Total Emission Reduction (tCO<sub>2</sub>/ year)

## 6.2 Baseline Emissions

As per description earlier under this document:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

$EF_{grid,CM,y}$  : Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the "Tool to calculate the emission factor for an electricity system" (tCO<sub>2</sub>/MWh) (i.e., 0.93684 tCO<sub>2</sub>/MWh).

$EG_{PJ,y}$  : Quantity of net electricity generation that is produced and fed into the grid as a result of the implementation of the project activity in year y (MWh/yr)

$BE_y$  : Baseline emissions in year y (tCO<sub>2</sub>e/yr)

Here,

| Monitoring Period:         | Total Net Power delivered to grid (MWh) | Baseline Emission Factor (tCO <sub>2</sub> e/MWh) | Total Emission Reduction (tCO <sub>2</sub> e/ year) |
|----------------------------|---|---|---|
| 16 Sep 2018 to 31 Oct 2018 | 0                                       | 0.93684   | 0   |

**Supporting evidence 3B:** Measurement of the second monitoring report (2020) for Total Emission Reduction (tCO<sub>2</sub>/ year)

## 5.1 Baseline Emissions

As per procedure established in the registered PD:

$$BE_y = EG_{PJ,y} * EF_{grid,CM,y}$$

$EF_{grid,CM,y}$  : Combined margin CO<sub>2</sub> emission factor for grid connected power generation in year y calculated using the latest version of the “Tool to calculate the emission factor for an electricity system” (tCO<sub>2</sub>/MWh) (i.e., 0.93684 tCO<sub>2</sub>/MWh).

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$BE_y$  : Baseline emissions in year y (tCO<sub>2e</sub>/yr).

Here,

| Monitoring Period:                                      | Total Net Power Generated (MWh) | Baseline Emission Factor (tCO <sub>2</sub> /MWh) | Total Emission Reduction (tCO <sub>2</sub> / year) |
|---|---------------------------------|--|--|
| 01-Nov-2018 to 31-Mar-2020<br>(both the dates included) | 318,858.43                      | 0.93684  | 298,718  |

\* rounded down value has been considered.

More information on the Total Net Power Generated (MWh) of the project can be found in section 5.1,Baseline Emissions < [VCS1842\\_PD\\_VERRA](#) >

- **Supporting evidence for contribution # 4**

**Supporting evidence 4A:** Explanation of Avaada EHS policy



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Avaada strongly believes that safety comes first and strives to provide safe workplace for all. Due emphasis is placed on appropriate planning and control including audits, inspections, and management review in ensuring that safety system is functioning effectively.

In general, 80% incidents are attributed to human failures. Keeping this in mind, Avaada has taken various measures to address incidents due to human error. To systematically manage safety at Avaada, we have a well-defined EHS Policy & list of EHS obligations. The EHS policy and EHS obligations is displayed at all prominent places across all Project sites. This policy mandates all employees to maintain a safe and healthy workplace and develop a culture of safety.

Avaada has a policy and procedure in place for 'Accident', 'Incident' and 'Near miss' reporting. No 'Accidents', 'Incidents' have been reported till date. However, 'Near Misses' have been reported and the details have been given in the table below.

**All the 'Near Misses' involved only Male staff and were non-fatal in nature.**

**Supporting evidence 4B:** Number of fatal and non-fatal accidents for project 1842



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| Summary of Incident Reporting<br>(01st April 2019 - 31st March 2020) |   |        |   |                  |             |  |
|--|---|--------|---|------------------|-------------|--|
|  | Project Name  | VCS ID | Project Location  | No. of Accidents | Near Misses | Remarks  |
| 1  | M/s Fermi Solarfarms Private Limited, Chalisgaon                      | 1844   | Village: Shivapur & Bodare<br>Taluk: Molakalmuru<br>District: Chitradurga<br>State: Maharashtra | Nil              | 1           | The Details of Incident reporting alongwith CAPA is given as <b>Annexure</b> |
| 2  | M/s Avaada Sustainable Energy Private Limited, Hangal                 | 1786   | Village: Hangal<br>Taluk: Molakalmuru<br>District: Chitradurga<br>State: Karnataka              | Nil              | Nil         | -  |
| 3  | M/s Solarsys Non-Conventional Energy Private Ltd, Ikal                | 1786   | Village: Balkundi<br>Taluk: Ikal<br>District: Bagalkot<br>State: Karnataka                      | Nil              | 2           | The Details of Incident reporting alongwith CAPA is given as <b>Annexure</b> |
| 4  | M/s Avaada Non-Conventional Energy Private Ltd, Hulikunte (Baravikal) | 1786   | Village: Hulikunte<br>Taluk: Kudligi<br>District: Bellary<br>State: Karnataka                   | Nil              | Nil         | -  |
| 5  | M/s Solarsys Non-Conventional Energy Pvt Ltd, Poojarhalli (KH-Halli)  | 1786   | Village: Poojarhalli<br>Taluk: Kudligi<br>District: Bellary<br>State: Karnataka                 | Nil              | Nil         | -  |
| 6  | M/s Clean Sustainable Energy Private Limited, Bhada                   | 1842   | Village: Bhada<br>Taluk: Bap<br>District: Phalodi<br>State: Rajasthan                           | Nil              | Nil         | -  |

The details of the incidents and Corrective and Preventive Action (CAPA) reports are provided below:

**Supporting evidence 4C:**



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