REG.OFFICE: H. NO. 6/121/1A, PLOT NO. G-1, VAIRAGI NI WADI, NEAR DELHI GATE SURAT – 395007 Email: audit@thenaturelink.in

# Verification Report UCR ID: 183



| Title             | 14 MW Small Scale Wind Power Project by M/s Shah Promoters and Developers.   |
|-------------------|--|
| Project Proponent | M/s Shah Promoters and Developers  |
| Project Location  | Village - Sakari, Taluka - Sakari DistDhule , & Village - Nagaj, Taluka - Kawathe Mahakal Dist Sangli, Maharshtra, India |
| Verified By       | Mr. Shardul Amin, Lead Verifier, Email: audit@thenaturelink.in, Contact: +91- 7574804497, Naturelink Solutions Pvt. Ltd. |
| Date              | 09/05/2023   |

| COVER PAGE   |   |  |  |  |  |
|--|---|--|--|--|--|
| Project Verification Report Form (VR)                                |   |  |  |  |  |
|  |   |  |  |  |  |
| BASIC INFO   | RMATION   |  |  |  |  |
| Name of approved UCR Project Verifier / Reference No.                | Naturelink Solutions Pvt. Ltd   |  |  |  |  |
| Type of Accreditation  | ☐ CDM Accreditation   |  |  |  |  |
|  | ☐ ISO 14065 Accreditation   |  |  |  |  |
|  | ☐ UCR Approved Verifier   |  |  |  |  |
| Approved UCR Scopes and GHG Sectoral scopes for Project Verification | Sectoral Scope: 01 Energy Industries  |  |  |  |  |
| Validity of UCR approval of Verifier                                 | May - 2022 onwards  |  |  |  |  |
| Completion date of this VR   | 09/05/2023  |  |  |  |  |
| Title of the project activity  | 14 MW Small Scale Wind Power Project by M/s Shah Promoters and Developers.    |  |  |  |  |
| Project reference no. (as provided by UCR Program)                   | 183   |  |  |  |  |
| Name of Entity requesting verification service                       | Creduce Technologies Private Limited (Aggregator)                             |  |  |  |  |
| Contact details of the representative of the                         | Shailendra Singh Rao  |  |  |  |  |
| Entity, requesting verification service                              | Mobile: +91-9016850742  |  |  |  |  |
| (Focal Point assigned for all communications)                        | Address: 2-O-13,14 Housing Board Colony, Banswara, Rajasthan - 327001, India. |  |  |  |  |
| Country where project is located                                     | India   |  |  |  |  |
| Applied methodologies  | AMS-I.D.: "Grid connected renewable electricity generation", version 18       |  |  |  |  |
| Project Verification Criteria:                                       | □ UCR Verification Standard   |  |  |  |  |

| Mandatory requirements to be assessed  | Applicable Approved Methodology  |
|--|--|
|  | Applicable Legal requirements /rules of the host country   |
|  |  |
|  | Start date of the Project activity   |
|  | Meet applicability conditions in the applied methodology   |
|  |  |
|  | □ Do No Harm Test  |
|  |  |
|  |  |
|  |  |
|  | Others (please mention below)  |
| Project Verification Criteria:  Optional requirements to be assessed                                 | ⊠ Environmental Safeguards Standard and do-no-harm criteria  |
|  | Social Safeguards Standard do-no-harm criteria   |
| Project Verifier's Confirmation:   | The UCR-approved verifier Naturelink   |
| The UCR Project Verifier has verified the UCR project activity and therefore confirms the following: | Solution Pvt. Ltd., verifies the following with respect to the UCR Project Activity "14 MW Small Scale Wind Power Project by M/s Shah Promoters and Developers."   |
|  | ☐ The project aggregator has correctly described the project activity in the Project   |
|  | Concept Note 2.0 (dated 02/05/2023) including the applicability of the approved methodology A.M.S I. D and meets the methodology applicability conditions and has achieved the estimated GHG emission reductions, complies with the monitoring |
|  | including the applicability of the approved methodology A.M.S I. D and meets the methodology applicability conditions and has achieved the estimated GHG emission  |

|  | monitoring report, which are additional to the reductions that are likely to occur in absence of the Project Activity and complies with all applicable UCR rules, including ISO 14064-2 and ISO 14064-3. |
|--|--|
|  | ∑ The project activity is not likely to cause any net-harm to the environment and/or society   |
|  | ☐ The project activity complies with all the applicable UCR rules and therefore recommends UCR Program to register the Project activity with above-mentioned labels.                                     |
| Project Verification Report, reference   | Verification Report UCR  |
| number and date of approval  | Project ID: 183  |
|  | Date: 09/05/2023   |
|  |  |
| Name of the authorised personnel of UCR Project Verifier and his/her signature with date |  |
|  | Mr. Shardul Amin Lead Verifier Naturelink Solution Pvt. Ltd. Date: 09/05/2023  |

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## **Project Verification Report**

#### A. Executive Summary

The verification work has been contracted by project aggregator Creduce Technologies Pvt Ltd to perform an independent verification of its UCR project titled "14 MW Small Scale Wind Power Project by M/s Shah Promoters and Developers, UCR approved project ID:183, to establish a number of CoUs generated by the project over the crediting period from 08/06/2019 to 31/12/2021 (both days included).

Verification for the period: 08/06/2019 to 31/12/2021

In my opinion, the total GHG emission reductions over the crediting / verification period stated in the Monitoring Report (MR), submitted to me are found to be correct and in line with the UCR guidelines. The GHG emission reductions were calculated on the basis of UCR guideline which draws reference from, the standard baseline, AMS. I. D – Grid connected renewable electricity generation (Version 18.0). As per the UCR guidelines, the verification was done remotely by way of video calls, phone calls, and submission of documents for verification through emails.

I am able to certify the emission reductions from the 14 MW Small Scale Wind Power Project by M/s Shah Promoters and Developers. (UCR ID - 183) for the period 08/06/2019 to 31/12/2021 amounts to **48015** CoUs (**48015** tCO<sub>2</sub>e).

#### **Scope**

The scope of the verification is the independent, objective review and ex-post determination of the monitored reductions in GHG emission by the project activity.

- 1. The quality of data management and records of underlying data;
- 2. Completeness and accuracy of calculations and baseline emission reports;
- 3. Proper inclusion and documentation of all project locations,
- 4. Correct application of offset rules for filling Baseline Period data gaps;
- 5. Other data, methods, and procedures deemed necessary to establish the accuracy of emission reductions.
- 6. Agreement stating assurance to avoid double accounting for the project to be verified, along with required proof.

The project is assessed against the requirements of the UCR program verification guidance document, UCR Standard, UCR Program Manual, and related rules and guidelines. Due professional care has been exercised and ethical conduct has been followed by the assessment team during the verification process. The verification report is a fair presentation of the verification activity. The validation of the project is not part of the present assignment and project is deemed validated post-registration by UCR.

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#### **Description of the Project**

The project activity involves 10 wind turbine generators (WTGs) having a total capacity of 14 MW manufactured and supplied by Suzlon Energy Ltd in the districts Dhule and Sangli of the state of Maharashtra in India.

| Site         | WEG<br>Locati<br>on<br>No. | Installed<br>Capacity | Village,<br>District | Substation     | Date of commission ing |
|--------------|----------------------------|-----------------------|----------------------|----------------|------------------------|
| Site         | J-17                       | 1.25                  | Jamade, Dhule        | Jamade         | 10/08/2006             |
| '            | J-21                       | 1.25                  | Jamade, Dhule        | Jamade         | 10/08/2006             |
|              | J-22                       | 1.25                  | Jamade, Dhule        | Jamade         | 10/08/2006             |
|              | J-23                       | 1.25                  | Jamade, Dhule        | Jamade         | 10/08/2006             |
| Site<br>- II | N-4                        | 1.50                  | Nagaj, Sangli        | Ghatnandr<br>e | 30/09/2007             |
|              | N-5                        | 1.50                  | Nagaj, Sangli        | Ghatnandr<br>e | 30/09/2007             |
|              | N-6                        | 1.50                  | Nagaj, Sangli        | Ghatnandr<br>e | 30/09/2007             |
|              | N-7                        | 1.50                  | Nagaj, Sangli        | Ghatnandr<br>e | 30/09/2007             |
|              | N-8                        | 1.50                  | Nagaj, Sangli        | Ghatnandr<br>e | 30/09/2007             |
|              | N-9                        | 1.50                  | Nagaj, Sangli        | Ghatnandr<br>e | 30/09/2007             |

| Site   | Windmill<br>Location no.  | Address  | Latitude and longitude |               |
|--------|---|--|------------------------|---------------|
| Sito I | R. S. No 19, Village –<br>J-17 Jamade, Taluka - Sakari,<br>Dist - Dhule |  | 21°10'50.8" N          | 74°21'32.3" E |
| Site I | J-21  | R. S. No 19, Village –<br>Jamade, Taluka - Sakari,<br>Dist - Dhule | 21°10'45.8" N          | 74°22'14.1" E |

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| Site  | Windmill<br>Location no.  | Address  | Latitude and longitude |               |
|---|---|--|------------------------|---------------|
|   | R. S. No 19, Village –<br>J-22 Jamade, Taluka - Sakari,<br>Dist - Dhule |  | 21°10'57.2" N          | 74°22'13.4" E |
| R. S. No 19, Village –<br>J-23 Jamade, Taluka - Sakari,<br>Dist - Dhule |   | 21°11'11.9" N  | 74°22'14.9" E          |               |
|   | N-4   | Survey no585, Village –<br>Nagaj, Taluka - Kawathe<br>Mahakal, Dist – Sangli | 17°09'49.3" N          | 74°56'58.1" E |
|   | N-5   | Survey no604, Village –<br>Nagaj, Taluka - Kawathe<br>Mahakal, Dist – Sangli | 17°10'00.8"N           | 74°57'04.0"E  |
| Cita II   | N-6   | Survey no604, Village –<br>Nagaj, Taluka - Kawathe<br>Mahakal, Dist – Sangli | 17°10'13.4" N          | 74°57'06.1" E |
| Site II   | N-7   | Survey no604, Village –<br>Nagaj, Taluka - Kawathe<br>Mahakal, Dist – Sangli | 17°10'25.5" N          | 74°57'04.4" E |
|   | N-8   | Survey no604, Village –<br>Nagaj, Taluka - Kawathe<br>Mahakal, Dist – Sangli | 17°10'37.1" N          | 74°57'06.9" E |
|   | N-9   | Survey no604, Village –<br>Nagaj, Taluka - Kawathe<br>Mahakal, Dist – Sangli | 17°10'48.8" N          | 74°57'07.8" E |

The technical specification is listed below;

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Technical details of 1500 kW WTG machine manufactured by Suzlon Energy Ltd. are as follows:

| Parameter      | Suzlon S-82 (1.5 MW) – Technical Overview |                           |  |  |
|----------------|---|---------------------------|--|--|
| Product No.    | S- 82                                     |                           |  |  |
|                | Rated Power                               | 1500 kW                   |  |  |
|                | Cut- in wind speed                        | 4 m/s                     |  |  |
| Operating Data | Rated Wind Speed                          | 14 m/s                    |  |  |
|                | Survival wind Speed                       | 52.5 m/s                  |  |  |
|                | Cut- out wind speed                       | 20m/s                     |  |  |
| Rotor          | Rotor diameter                            | 82 m                      |  |  |
| Generator      | Frequency                                 | 690 V (50 Hz)             |  |  |
| Generalor      | Type                                      | Asynchronous              |  |  |
|                | Hub Height                                | 78.5 m                    |  |  |
| Tower          | Type                                      | Tubular tower with welded |  |  |
|                | Туре                                      | steel plates              |  |  |

Technical detail of 1250 kW WTG Machine manufactured by Suzlon Energy Ltd. Energy is as follows:

| Parameter      | Suzlon S-70 (1.25 MW) – Technical Overview |                           |  |  |  |
|----------------|--|---------------------------|--|--|--|
| Product No.    | S  | - 70                      |  |  |  |
| Operating Data | Rated Power                                | 1250 kW                   |  |  |  |
|                | Cut- in wind speed                         | 3 m/s                     |  |  |  |
|                | Rated Wind Speed                           | 12 m/s                    |  |  |  |
|                | Survival wind Speed                        | 67 m/s                    |  |  |  |
|                | Cut- out wind speed                        | 20m/s                     |  |  |  |
| Rotor          | Rotor diameter                             | 70 m                      |  |  |  |
| Generator      | Frequency                                  | 690 V (50 Hz)             |  |  |  |
|                | Type                                       | Asynchronous              |  |  |  |
|                | Speed at rated Power                       | 1511 rpm                  |  |  |  |
| Tower          | Hub Height                                 | 75 m                      |  |  |  |
|                | Type                                       | Tubular tower with welded |  |  |  |
|                |  | steel plates              |  |  |  |

As mentioned in the monitoring report and emission reduction calculation sheet submitted for verification, the project replaces anthropogenic emissions of greenhouse gases (GHGs) estimated to be approximately **48015** tCO<sub>2</sub>e for the said period under verification, there on displacing **53350.8** MWh amount of electricity from the generation mix of power plants connected to the Indian electricity grid, which is mainly dominated by the fossil-fuel based power plant.

The project activity is a grid-connected renewable energy generation project having a capacity of less than 15 MW. The project is a small-scale activity. The methodology applied in the monitoring report is verified against the A.M.S I. D "Grid connected renewable electricity generation" version 18.0.

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Verified total emission reductions (ERs) achieved through the project activity during the monitoring period is summarised below:

| Summary of the Project Activity and ERs Generated for the Monitoring Period |                                 |  |  |  |
|---|---------------------------------|--|--|--|
| Start date of this Monitoring Period  | 08/06/2019                      |  |  |  |
| Carbon credits claimed up to  | 31/12/2021                      |  |  |  |
| Total ERs generated (tCO₂e)   | <b>48015</b> tCO <sub>2</sub> e |  |  |  |
| Leakage Emission  | 0                               |  |  |  |
| Project Emission  | 0                               |  |  |  |

#### B. Project Verification team, technical reviewer and approver:

| Sr. | Role                                      | Last | First   | Affiliation   | Involvement in |                     | in         |
|-----|---|------|---------|---|----------------|---------------------|------------|
| No  |   | name | name    |   | Doc<br>review  | Off-Site inspection | Interviews |
| 1.  | Lead<br>Verifier<br>& Technical<br>Expert | Amin | Shardul | Lead Verifier,<br>Naturelink<br>Solutions Pvt<br>Ltd. | Yes            | No                  | Yes        |

#### **C.** Means of Project Verification

#### C.1 Desk/document review

The project documents submitted to UCR-approved verifier Naturelink Solution Pvt. Ltd. was reviewed and verified by the lead verifier. The documents reviewed involves verification of the legal status of individual project owner for consistency, project-related documents like installation and commissioning of equipment used in project activity, environmental clearances from state or central pollution control board, monitoring related equipment/measuring instruments and their calibration records, to establish the running of equipment for the crediting period, etc.

The PCN is made available to the verifier post approval by UCR which is considered as validated documents and the content of validated PCN is considered as record wherever required. Further, the communication agreement made between the project owner and project aggregator is a document of the UCR registry hence the project aggregator is treated as an authorized representative of the project owner. All the documents submitted by the project aggregator to the verifier are treated as documents submitted on behalf of the project owner.

The list of submitted documents is available in a subsequent section of this verification report under the section "Document reviewed or referenced"-section I.

#### **C.2** On-Site inspection- Not applicable.

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Date of off-site inspection: DD/MM/YYYY Not applicable as per UCR guideline site visit not conducted for this verification activity.

No. Activity performed Off-Site Site location Date

#### C.3 Interviews: Telephonic and mail.

As per UCR guidelines, the site visit was not conducted during verification and only interviews are conducted.

|     |           | Interview  |  |                      |   |
|-----|-----------|------------|--|----------------------|---|
| No. | Last name | First name | Affiliation                            | Date                 | Subject   |
| 1.  | Bhosale   | Arvind     | Shah<br>Promoters<br>and<br>Developers | 04 and<br>08/05/2023 | Meter calibration, project commissioning , and overview |

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# Clarification request (CLs), corrective action request (CARs) and forward action request (FARs) raised

| Areas of Project Verification findings   | No. of<br>CL | No. of<br>CAR | No. of<br>FAR |
|--|--------------|---------------|---------------|
| Green House Gas (0   | GHG)         |               |               |
| Identification and Eligibility of project type   | NIL          | NIL           | NIL           |
| General description of project activity  | 1            | 1             | NIL           |
| Application and selection of methodologies and standardized baselines                                    | 1            |               |               |
| <ul> <li>Application of methodologies and<br/>standardized baselines</li> </ul>                          | NIL          | NIL           | NIL           |
| Deviation from methodology and/or methodological tool  | NIL          | NIL           | NIL           |
| <ul> <li>Clarification on applicability of methodology,<br/>tool and/or standardized baseline</li> </ul> | NIL          | NIL           | NIL           |
| <ul> <li>Project boundary, sources and GHGs</li> </ul>   | NIL          | NIL           | NIL           |
| Baseline scenario  | NIL          | NIL           | NIL           |
| <ul> <li>Estimation of emission reductions or net<br/>anthropogenic removals</li> </ul>                  | NIL          | NIL           | NIL           |
| Monitoring Report  | 1            | 1             | NIL           |
| Start date, crediting period and duration  | NIL          | NIL           | NIL           |
| Environmental impacts  | NIL          | NIL           | NIL           |
| Project Owner- Identification and communication  | NIL          | NIL           | NIL           |
| Others (please specify)  | NIL          | NIL           | NIL           |
| Total  | 2            | 2             | NIL           |

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## **D. Project Verification findings**

## D.1 Identification and eligibility of project type

| Means of Project<br>Verification | The project has taken the reference of CDM methodology AMS-I D, version 18 Grid Connected Renewable Electricity Generation.   |  |  |  |  |
|----------------------------------|---|--|--|--|--|
| Findings                         | <ol> <li>Project activity is described through UCR-approved PCN.</li> <li>UCR project communication agreement clearly defines the<br/>Project Proponent and Project Aggregator.</li> </ol>  |  |  |  |  |
| Conclusion                       | The UCR-approved format is used for description and the project meets the requirement of the UCR verification standard and UCI project standard.  |  |  |  |  |
|                                  | UCR project communication agreement was submitted to the verifier and the same has been verified. Methodology referenced and applied appropriately describing the project type. The eligibility of the project aggregator is verified using the UCR communication agreement, Project correctly applies the verification standard, UCR project standard, and UCR regulations.  The project activity is overall meeting the requirements of the UCR Verification standard and UCR project standard. |  |  |  |  |

## D.2 General description of project activity

| Means of Project<br>Verification | The project activity involves the operation of 14 MW of small-scale wind power project and its commissioning date was verified through the commissioning certificate of the project. The power evacuation at the substation is confirmed by the monthly credit note.   |  |  |  |
|----------------------------------|--|--|--|--|
| Findings                         | <ul> <li>CL 1 is raised for the missing details of the wind turbine located in Dhule.</li> <li>CAR 1 is raised due to the pinpoint locations of the wind turbine ID N5 and J23 did not show the wind turbine.</li> <li>1. Project Commissioning date is mentioned in the commissioning certificate.</li> <li>2. Turbine Capacity is the same as mentioned in the commissioning certificate provided by MEDA.</li> <li>3. Project implementation and sale of energy abide by the Wind Energy Purchase Agreement.</li> </ul> |  |  |  |
| Conclusion                       | CL 1 and CAR 1 are closed.   |  |  |  |

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| The description of the project activity is verified to be true based on |  |  |  |
|---|--|--|--|
| the review of PCN, MR, Commissioning Certificate, and Purchase          |  |  |  |
| Order Copies.   |  |  |  |

## D.3 Application and selection of methodologies and standardized baselines

#### D.3.1 Application of methodology and standardized baselines

| Means of Project<br>Verification | The project has taken the reference of CDM methodology A.M.S I.D. CDM website is referred to check the latest version of the methodology. For the applicability mentioned in the PCN and MR, turbine Specification, and commissioning certificate. |
|----------------------------------|--|
| Findings                         | The methodology applied is applicable to the project activity.   |
| Conclusion                       | The methodology applied is appropriately meeting the requirements of UCR and its standardized baseline. The methodology version is correct and valid. The referenced methodology is applicable to project activity.                                |

#### D.3.2 Clarification on applicability of methodology, tool, and/or standardized baseline

| Means of Project<br>Verification | The documents reviewed are A.M.S I. D "Grid connected renewable electricity generation" version 18, UCR Program standard, and UCR Verification Standard.  |
|----------------------------------|---|
| Findings                         | The emission factor (=0.9 $tCO_2/MWh$ ) is taken as per the UCR standard.   |
| Conclusion                       | The emission factor considered for the calculation of the emission reductions is verified with the UCR Program Standard. The total installed electrical energy generation capacity of the project equipment does not exceed 15 MW thus meeting the requirement of small-scale projects. |

#### D.3.3 Project boundary, sources and GHGs

| Means of Project<br>Verification | Letter from CPCB dated 07/03/2016 No. B-29012/ESS(CPA)/2015-16. PCN section B.4.   |
|----------------------------------|--|
| Findings                         | Project boundary is appropriately defined in PCN which is the physical and geographical site of energy generation.                     |
| Conclusion                       | The project boundary is correctly defined in the PCN. GHG source correctly identified and reported. The project meets the requirements |

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| of UCR project standard, Verification Standard, and Methodology |
|---|
| requirements for a boundary, GHG source.                        |

#### D.3.4 Baseline scenario

| Means of Project<br>Verification | MR Section C.5 and General Project Eligibility Criteria and Guidance, UCR Standard.   |
|----------------------------------|---|
| Findings                         | None  |
| Conclusion                       | The baseline scenario is appropriately described. The calculated baseline emission for each vintage year of crediting period is rounded down as per UCR standard. |

## D.3.5 Estimation of emission reductions or net anthropogenic removal

| Means of Project<br>Verification | MSEDCL Credit Notes, General Project Eligibility Criteria and Guidance, Calibration Report, and UCR Standard, page 4.  |                         |  |  |  |  |  |
|----------------------------------|--|-------------------------|--|--|--|--|--|
| Findings                         | None   |                         |  |  |  |  |  |
| Conclusion                       | A monthly credit note provided by the MSEDCL is considered an acceptable document to check actual energy generation for each month. A copy of the sample has been cropped and attached for reference purposes. |                         |  |  |  |  |  |
|                                  | Year EGpy (MWh) EFgrid,y ERs   |                         |  |  |  |  |  |
|                                  | 2019 16576.93 0.9 14919  |                         |  |  |  |  |  |
|                                  | 2020 17900.37 0.9 16110  |                         |  |  |  |  |  |
|                                  | 2021   | 2021 18873.44 0.9 16986 |  |  |  |  |  |
|                                  | ER (tCO <sub>2</sub> e) for the period of 2019 to 2021 48015   |                         |  |  |  |  |  |

#### **D.3.6 Monitoring Report**

| Means of Project<br>Verification | MSEDCL Credit Note, wind energy purchase agreement, and general project eligibility criteria and guidance, <u>UCR</u> standard, page 4, meter calibration report  Energy meter photos installed at the wind turbine are attached at Annexure II. |
|----------------------------------|--|
| Findings                         | CL 2 is issued to confirm the double accounting as the project is already registered on VERRA and CDM registry.  |

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|            | CAR 2 is raised as the monitoring plan has involved M/s Enercon India Ltd for the determination of energy generation report, however, there was no role of M/s Enercon India Ltd.  Details of meter calibration is as follow;  |   |  |  |  |   |  |
|------------|--|---|--|--|--|---|--|
|            | Loca<br>tion   | WTG ID  | Fee<br>der   | Meter Sr. No Calibrat  |  |   |  |
|            | Discol   | 1.47  | No.  | Main   | Check  | 00/00/004   |  |
|            | Dhul<br>e  | J 17  | 13   | 02839054   | 02839055   | 23/03/201<br>8  |  |
|            |  | J 21, J22,<br>J23   | 2  | 02814589   | 02814590   | 23/03/201<br>8  |  |
|            | San<br>gli   | N 4, N5,<br>N6, N7  | 9  | 14796403   | 14796404   | 23/03/201<br>8  |  |
|            |  | N8,N9   | 10   | 14796408   | 14796412   | 23/03/201<br>8  |  |
| Conclusion | CL 2 is closed. The project was registered on VERRA and CDM but there is no overlap of crediting period and the project owner has already claimed the carbon credit from 08/06/2007 to 07/06/2009 and 08/06/2009 to 07/06/2019 on VERRA and CDM respectively.  CAR 2 is closed and correction has been made in the monitoring plan.  Calibration reports of the meters provided by PP certify that errors are within permissible limits and details are mentioned below. |   |  |  |  |   |  |
|            | parame calibrati number reported all the pis as pecalculat   | ters relevant on report er of CoUs ged data. The contracters were uccent on the contracters are contracted to the original of | nt to nsures ineration calculation vere repard. In the | eported in MR emission recthe accuracy in is calculated on was done uported. The emhe monitoring alculated and ements of U | duction calculof the data real based on this sing an excel hission factor for report, emission reported. The | eported. The s accurately sheet where for electricity on reduction e monitoring |  |

## D.4 Start date, crediting period and duration

| Means of Project<br>Verification | PCN and MR, purchase order of turbine and technical Specification sheet, commissioning certificate, and detailed project report documents were referred. |  |  |  |
|----------------------------------|--|--|--|--|
| Findings                         | The declared information is correct and verified.  |  |  |  |

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| Conclusion | The start date, crediting period and project duration are reported correctly and this meets the requirements of the UCR verification standard and UCR project standard. |
|------------|---|
|            | The start date : 08/06/2019   |
|            | Crediting period: 08/06/2019 to 31/12/2021  |

## **D.5** Positive Environmental impacts

| Means of Project<br>Verification | PCN  |
|----------------------------------|--|
| Findings                         | None.  |
| Conclusion                       | The project is a renewable energy project and reduces the environmental burden by reducing the dependence on fossil fuel-based power plants. |

## **D.6** Project Owner- Identification and communication

| Means of Project<br>Verification | PCN, communication agreement, MR, purchase order of turbine, commissioning certificate, power purchase agreement/wheeling agreement.  |  |  |  |
|----------------------------------|---|--|--|--|
| Findings                         | The declared information is correct and verified.   |  |  |  |
| Conclusion                       | The project owner was identified through a communication agreement signed between PP and PA. Equipment purchase order and commission verified. Also, a legal document like Power Purchase Agreement/ Wheeling Agreement clearly establishes the project owner. The identification and communication correctly meet the requirement of project verification and UCR project standard. Project owner details;  M/s Shah Promoters and Developers.  Address: AST-1, Success Chamber,1232, Apte Road, Deccan Gymkhana, Pune - 411004. |  |  |  |

## **D.7** Positive Social Impact

| Means of Project | Project has provided temporary employment to local people during    |
|------------------|---|
| Verification     | its installation and commissioning. Also post commissioning some of |
|                  | people have employed permanently and local people were engaged      |

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|            | leading to social financial benefit to surrounding. Overall social impact of project implementation is positive on the surrounding area. |  |  |  |
|------------|--|--|--|--|
| Findings   |  |  |  |  |
| Conclusion | Project has overall positive social impact.  |  |  |  |

#### D.8 Sustainable development aspects (if any)

| Means of Project<br>Verification | Not Applicable  |
|----------------------------------|---|
| Findings                         |   |
| Conclusion                       | The Project has the capability to address SDG 7 Affordable and Clean Energy and SDG 13 Climate Action |

#### E. Internal quality control:

- Due professional care has been taken while reviewing the submitted document.
- There is no conflict of interest as the verifier has no other engagement with either the aggregator or project owner directly or indirectly.
- Verification team consists of experienced personnel.
- Technical review is performed by an independent person.

#### F. Project Verification opinion:

Considering the above-mentioned verification conducted on the basis of UCR Protocol, which draws reference from UCR Protocol Standard Baseline, AMS.I.D – Grid connected renewable electricity generation (Version 18.0), the documents submitted during the verification including the data, PPA, Purchase order, Calibration Report, Commissioning Certificate, Project Concept Note (PCN), Monitoring Report (MR), I am able to certify that the emission reductions from the project - 14 MW Small Scale Wind Power Project by M/s Shah Promoters and Developers. (UCR ID – 183) for the period 08/06/2019 to 31/12/2021 amounts to 48015 CoUs  $(48015 \text{ tCO}_2\text{e})$ .

#### G. Abbreviations

| Abbreviations | Full texts  |  |
|---------------|---|--|
| UCR           | Universal Carbon Registry                           |  |
| CPCB          | Central Pollution Control Board                     |  |
| MSEDCL        | Maharashtra State Electricity Distribution Co, ltd. |  |
| MEDA          | Maharashtra Energy Development Agency.              |  |

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| CEA                | Central Electricity Authority            |  |  |
|--------------------|--|--|--|
| MR                 | Monitoring report                        |  |  |
| PCN                | Project Concept Note                     |  |  |
| VR                 | Verification Report                      |  |  |
| VS                 | Verification Statement                   |  |  |
| DAA                | Avoidance of Double Accounting Agreement |  |  |
| COD                | Commercial Operation Date                |  |  |
| PP/PO              | Project Proponent / Project Owner        |  |  |
| PA                 | Project Aggregator                       |  |  |
| PPA                | Power Purchase Agreement                 |  |  |
| ER                 | Emission Reduction                       |  |  |
| CoUs               | Carbon offset Units.                     |  |  |
| tCO <sub>2</sub> e | Tons of Carbon Dioxide Equivalent        |  |  |
| kWh                | Kilo-Watt Hour                           |  |  |
| MWh                | Mega-Watt Hour                           |  |  |
| kW                 | Kilo-Watt                                |  |  |
| MW                 | Mega-Watt                                |  |  |
| CDM                | Clean Development Mechanism              |  |  |
| SDG                | Sustainable Development Goal             |  |  |
| CAR                | Corrective Action Request                |  |  |
| CL                 | Clarification Request                    |  |  |
| FAR                | Forward Action Request                   |  |  |
| GHG                | Green House Gas                          |  |  |
| WTG                | Wind Turbine Generator                   |  |  |
|                    | 1  |  |  |

## H. Competence of team members and technical reviewers

| No. | Last<br>name | First<br>name | Affiliation   | Technical Competence  |
|-----|--------------|---------------|---------------|---|
| 1.  | Amin         | Shardul       | Lead Verifier | Mr. Shardul Amin is a post-graduate having M.Tech in Thermal System Design. He has more than 6 years of experience in the field of waste-to-energy, thermochemical conversion technologies, and emission study. |

#### I. Document reviewed or referenced

| No. | Author      | Title  | Provider |
|-----|-------------|--|----------|
| 1   | UCR         | Communication agreement  | PA       |
| 2   | Creduce     | Project Concept Note   | PA       |
| 3   | Creduce     | Monitoring report  | PA       |
| 4   | Creduce     | Avoidance of double accounting   | PA       |
| 5   | Creduce     | Emission reduction excel   | PA       |
| 6   | MSEDCL      | Monthly Credit Note (2020-2021)  | PA       |
| 7   | MEDA        | Commissioning certificate  | PA       |
| 8   | MSEDCL & PP | Wind Energy Purchase Agreement   | PA       |
| 9   | PP          | Purchase order of turbine  | PA       |
| 10  | PP          | Purchase order of generator  | PA       |
| 11  | CEA         | Central Electricity Authority (Installation and Operation of Meters) (Amendment) Regulations, 2019 | -        |
| 12  | MSEDCL      | Calibration reports  | PA       |
| 13  |             |  |          |

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## J. Clarification request, corrective action request and forward action request

## **Table 1. CLs from this Project Verification**

| CL ID  | 01   | Section no.: D.2 | General Description of Project Activity | <b>Date:</b> 02/05/2023 |  |
|--|--|------------------|---|-------------------------|--|
| Description  | of CI  | -                |   |                         |  |
| Meter photo  | Meter photos and turbine description is not available for Dhule WTGs |                  |   |                         |  |
| Project Owner's response Date: 03/05/2023                              |  |                  |   |                         |  |
| Mailed the documents   |  |                  |   |                         |  |
| Documentation provided by Project Owner                                |  |                  |   |                         |  |
| Meter photos, project photos and turbine specifications were provided. |  |                  |   |                         |  |
| UCR Project Verifier assessment Date: 09/05/2023                       |  |                  |   |                         |  |
| The provided information is found to be correct and CL1 is closed.     |  |                  |   |                         |  |

| CL ID   | 02                | Section no.: D.3.6 | Monitoring<br>Report | <b>Date:</b> 02/05/2023 |  |  |
|---|-------------------|--------------------|----------------------|-------------------------|--|--|
| Description   | Description of CL |                    |                      |                         |  |  |
| Provide the crediting period of the project registered on VERRA and CDM.                                |                   |                    |                      |                         |  |  |
| Project Owner's response Date: 03/05/2023   |                   |                    |                      |                         |  |  |
| VERRA and CDM project ID and Weblink will be provided.  |                   |                    |                      |                         |  |  |
| Documentation provided by Project Owner   |                   |                    |                      |                         |  |  |
| VERRA and CDM ID  |                   |                    |                      |                         |  |  |
| UCR Project Verifier assessment Date: 09/05/2023  |                   |                    |                      |                         |  |  |
| There will not be double accounting as the project crediting period does not overlap and CL2 is closed. |                   |                    |                      |                         |  |  |

## **Table 2. CARs from this Project Verification**

| CAR ID             | 01 | Section<br>D.2 | no.: | General Description of Project Activity | Date: 02/05/2023 |  |
|--------------------|----|----------------|------|---|------------------|--|
| Description of CAR |    |                |      |   |                  |  |

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WTG ID N5 and J23 do not show the wind turbine in google maps. Correct coordinates are required.

Project Owner's response

Date: 08/05/2023

Provided the correct coordinates.

Documentation provided by Project Owner

Google Coordinates.

UCR Project Verifier assessment

Date: 09/05/2023

Coordinates provided are correct and CAR 1 is closed

| CAR ID  | 02                 | Section<br>no.: D.3.6 | Monitoring Report | Date: 02/05/2023 |  |  |  |
|---|--------------------|-----------------------|-------------------|------------------|--|--|--|
| Description   | Description of CAR |                       |                   |                  |  |  |  |
| PCN has shown the M/s Enercon India Ltd was involved in the Energy generation report. While there is no evidence available in the monitoring report or documents submitted by the PP. |                    |                       |                   |                  |  |  |  |
| Project Owner's response  Da  08/   |                    |                       |                   |                  |  |  |  |
| There was a mistake in the PCN.   |                    |                       |                   |                  |  |  |  |
| Documentation provided by Project Owner   |                    |                       |                   |                  |  |  |  |
| Revised PCN 2.0   |                    |                       |                   |                  |  |  |  |
| UCR Projec  | Date:              |                       |                   |                  |  |  |  |
|   |                    |                       |                   | 09/05/2023       |  |  |  |
| CAR 2 is closed.  |                    |                       |                   |                  |  |  |  |

#### **Table 3. FARs from this Project Verification**

| FAR ID                                  |  | Section no. |  | Date: |  |
|---|--|-------------|--|-------|--|
| Description of FAR                      |  |             |  |       |  |
| Project Owner's response Date:          |  |             |  | Date: |  |
| Documentation provided by Project Owner |  |             |  |       |  |

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## **ANNEXURE I: Photographs of the Power Plant**





















Figure-1: Project Activity

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#### Group Credit Note MAHARASHTRA STATE ELECTRICITY DISTRIBUTION CO.LTD. ( Corporate Office ) **Energy Purchase Agreement** Metering Point No. :- 0248016409 Date of Comm: 30-SEP-2007 Month: Mar Year: 2020 H.O. NOC NO: Capacity: 1.5 MW Energy Purchase Agreement - Sale to MSEDCL Feeder Name: 409 H.O. NOC Period: 30-SEP-2007 to 29-SEP-2020 Substation Name: 248016 Shah Promoters & Developers... Sub :- Feederwise Monthly Creditnote in r/o 220/33 KV Suzlon Feeder No.10 having (1.500X13) WTGs for the M/o Mar - 20 . Ref :- Energy Purchase Agreement - Sale to MSEDCL, CO-ORD CELL/WIND/NO. 10441 DATED 31.03.2008, from 30-SEP-2007 to 29-SEP-2020 Meter Serial No.: 14796408 Meter Make : 057 Line CT Ratio : 600/1 Line PT Ratio : 33/110 Meter CT Ratio: 1/1 Meter PT Ratio : 11/110 Hence M.F.: 1800 Polarity : REC Sr. Billing Meter Reading as on Billing Meter Reading as on Unit Recorded by Billing Parameter Difference No. Current (Date) Previous (Date) Meter 1. KWH DEL 1089.798 10.148 18265.500 2. KWH DEL A 315.870 314.340 1.530 2754.000 3. KWH DEL B 443 558 438 618 4 940 8892 000 2.058 3703.500 KWH DEL C 161,140 159.083 4. 5. KWH DEL D 1.620 2916.000 6. KWH REC 141894.970 141085 648 809.323 1456780 500 7. KWH REC A 51043.428 385.735 694323.000 51429.163 8. KWH REC B 47332.585 47149.050 183.535 330363.000 9. KWH REC C 13514.283 13487.515 26.768 48181.500 10. KWH REC D 29618.940 29405.655 213.285 383913.000 KVAH DEL 10.148 18265.500 11. 1098.368 1088.220 853.353 12. KVAH REC 146066.408 145213.055 1536034.500 13. KVARH Q1 0.003 4.500 14. KVARH Q2 2922.525 2897.473 25.053 45094.500 KVARH Q3 18783.638 18588.740 194.898 350815.500 15. 16. KVARH Q4 2795.158 0.530 954.000 Multiplying Factor : 1800 Total RKVAH Units : 29715.7311 Gen. P.F (LD) 9484 Generator wise unit bifurcation Type of Sr. Generator Date of RKVAH Generator Generator Generato No of WTG % Import Export Net KWH Capacit Buyer Comm Address KWH name EP/EPS Shah 30-Promoters SEP-C520300000395006 129507.786451623.80295127883.98354009.3011 2007 Developers Shah Promoters 126739.9035 1589.0985 125150.805 3923.613 SEP- C520300000395005 Ghatnandre N08 1.5 1 8.7 & 2007 \*This is an electronically generated report, sign is not required.

Figure-2: Sample Credit Note

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#### **ANNEXURE II: Meter Photos.**







**Figure-3: Meter Photos**