



TUPPADAHALLI WIND ENERGY PROJECT



Document Prepared By

LGAI Technological Center S.A. (Applus+ Certification)

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Summary:

Verification purpose: LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by Tuppadahalli Energy India Pvt. Ltd. to perform the 2nd periodic verification of the project activity “Tuppadahalli Wind Energy Project”. The main purpose of this verification activity is to have an independent third party for the assessment of the project design, monitoring report to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements.

The project activity involves installation of 56.1MW wind power project consisting total 34 turbines of 1.65 MW each in Shimoga and Chitradurga District of Karnataka, India. The project activity is using V 82 class IIA WTG manufactured by Vestas. The entire power generated is exported to the state grid maintained by the Karnataka Power Transmission Corporation Limited (KPTCL) which is integral INDIAN grid now. This helps in reducing the supply demand gap in the state.

Start date of the project activity is 29/07/2011. This is the day on which first sets of WTGs was commissioned under the project activity which is as per commissioning certificate, registered VCS PD version 03 dated 21/09/2012 and final validation report version 01 dated 06/10/2012.

The scope of the verification is the independent and objective review of the monitoring report (MR). The MR is reviewed against the relevant criteria (see above) and decisions by the CDM Executive Board and VCS executive board, including the approved baseline and monitoring methodology. The verification was based on the guidance given in the CDM Validation and Verification Standard for the project activities, version 02.0, review against registered PD and Final Validation report, CDM Project Standard for project activities, version 02.0; CDM Project Cycle Procedure for project activities, version 02.0 and VCS program guideline and standard version 4.0

This is the 2nd monitoring under VCS and covers the activity from 01/04/2012 to 31/03/2018 (inclusive of both dates). The total emission reductions achieved for the project activity during the monitoring period has been 743,544 tCO₂e. The crediting period for VCS began on 29/07/2011 and will end on 28/07/2021. An undertaking from the project participant confirms that project will not claim any other scheme benefits for the concerned monitoring period.

A risk based approach has been followed to perform this verification activity. In the course of verification, 05 Corrective Action requests (CAR), 00 Clarification Requests (CLs) and 00 Forward action requests (FARs) were raised and successfully closed. The review of the Monitoring report and additional documents related to baseline and monitoring methodology; the subsequent background investigation, follow-up interviews and PP have provided DOE with sufficient evidence to verify the fulfilment of the stated criteria of VCS.

The assessment team has employed a risk based approach to assess the completeness and accuracy of the claims and conservativeness of the assumptions in the MR. The main focus of the assessment team is to identify the significant risks for the project implementation and the generation of VERs. The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the monitoring report combined.

The only purpose of the verification is its usage during the issuance process as part of the VCS project cycle. Therefore, LGAI Technological Center S.A. (Applus+ Certification) can't be held liable by any party for decisions made or not made based on the verification opinion, which will go beyond that purpose.

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for site visit or document verifications. The entire documents checked/WTGs verification conducted to arrive at positive verification conclusions.

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1 INTRODUCTION

1.1 Objective

LGAI Technological Center S.A. (Applus+ Certification) (Hereafter referred as Applus+ Certification) has been appointed by “Tuppadahalli Energy India Pvt. Ltd.” to perform the 2nd periodic verification of the “Tuppadahalli Wind Energy Project” under VCS standard and guideline version 4.0. The objective of this verification activity is to have an independent third party for the assessment of the project design, monitoring report and final verification report and to ensure a thorough assessment of the proposed project activity against the applicable CDM and VCS requirements. In particular;

- the project's baseline is assessed against “ACM0002, Version 12.1.0”
- the project's monitoring plan is assessed against “ACM0002, Version 12.1.0”
- the projects compliance with, the requirements of Article 12 of the Kyoto Protocol, the CDM Modalities and Procedures as agreed in the Marrakech Accords under decision 3/CMP.1, the annexes to this decision, subsequent decisions and guidance made by COP/MOP & CDM Executive Board and other relevant rules, including the Host Country legislation and sustainability criteria along with VCS guideline and standard version 4.0
- CDM validation and verification standard for project activities, version 02.0
- CDM Project Standard for project activities, version 02.0
- CDM project cycle procedure for project activities, version 02.0
- VCS standard v4.0
- VCS program guideline v4.0

Verification is a requirement for all VCS projects and is seen as necessary to provide assurance to stakeholders of the quality of the project and its intended generation of verified emission reductions (VERs).

1.2 Scope and Criteria

The scope is defined as an independent and objective review of the Monitoring report (MR) prepared as per the registered PD and registered approved methodology ACM0002 version 12.1.0. The MR is reviewed against the criteria stated in Article 12 of the Kyoto Protocol, the CDM modalities and procedures as agreed in the Marrakech Accords and the relevant decisions by the CDM Executive Board and VCS standard and guideline version 4.0, including the approved baseline and monitoring methodology ACM0002 version 12.1.0. The verification was based on the requirements in the CDM validation and verification standard for project activities, Version 02.0, CDM Project Standard for project

activities, version 02.0, CDM project cycle procedure for project activities, version 02.0 and VCS program guideline and standard version 4.0

The verification is not meant to provide any consulting towards the project participants. However, stated requests for clarifications and/or corrective actions may have provided input for improvement of the Monitoring report. In line with Guidelines for Application of materiality in verifications, the verification team has conducted a complete verification of all the information presented in the monitoring report and data monitored as presented in the emission reduction calculation spread sheet. It invoices follows the paper trail back to the raw data such as meter reading records and invoices. There are no material errors, overestimation of ER, omission or misstatement. No sampling is used as the verification team has visited the WTGs along with the substations. The verification team has reviewed all the documents like commissioning certificates, JMR, invoices etc.

1.3 Level of Assurance

The verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for site visit or document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions.

1.4 Summary Description of the Project

The project activity involves generation of electricity through wind power plant with a capacity of 56.1 MW comprises of 34 WTGs, each with capacity of 1.65 MW each. The wind energy project is located near Village of Tuppadahalli in the Hollalkere and Chennagiri Taluk in the district of Shimoga and Chitradurga in the Indian state of Karnataka. The purpose of the project activity is to generate electricity by the utilization of wind energy. In this process there is no consumption of any fossil fuel and hence it does not lead to any greenhouse gas emissions. The project activity was commissioned on 29/07/2011. The Project activity feed generated power to the state grid maintained by the Karnataka Power Transmission Corporation Limited (KPTCL) which is integral part of Indian grid now. The electricity generated is supplied to Mangalore Electricity Supply Company (MESCOM) under a long-term Power Purchase Agreement (PPA).

The monitoring period this VCS verification covered from 01/04/2012 to 31/03/2018 (inclusive of both dates) and the project activity is achieved 743,544 tCO₂e emission reductions during this monitoring period.

Assessment team checked the Commission of WTG with the commissioning Certificates and found correct. The commissioning dates of the WTGs are provided in Section 4.0 of this report. The project is implemented as per the description in the registered PD. No

event observed during the current monitoring period which can alter or deviate from the methodology requirement.

2 VERIFICATION PROCESS

2.1 Method and Criteria

Verification Process: The project assessment is based on the “CDM validation and verification standard for project activities, Version 02.0 and “VCS standard and program guideline version 4.0” and is conducted using standard auditing techniques to assess the correctness of the information provided by the project participants. Before the assessment begins, members of the team covering the technical scope(s), sectoral scope(s), and relevant host country experience for evaluating the VCS project activity are appointed.

Once the project is received by the assessment team, the members of the assessment team carried out:

1. A desk review of the Monitoring report against the registered PD and final validation report;
2. Follow-up interviews/onsite visit with project participant;
3. The resolution of outstanding issues and the issuance of the final verification report and opinion.

The prepared verification report and other supporting documents then undergo an internal quality control at the HQ (Accredited office) before being submitted to the VCS executive board.

In order to ensure transparency, assumptions must be clear and stated explicitly and background material must also be referenced. Applus+ Certification has developed a specific checklist customized for the project. The checklist demonstrates, in a transparent manner, the project criteria (requirements), discussion on each criterion by the assessment team, and the results from validating the identified criteria.

Appointment of the assessment team

According to the sectoral scope / technical area and experience in the sectoral or national business environment, Applus+ Certification has composed a project assessment team in accordance with the appointment rules in the internal Quality Management System of Applus + Certification.

The composition of audit team shall be approved by the Applus + Certification ensuring that the required skills are covered by the team.

The four qualification levels for team members that are assigned by formal appointment rules are as presented below:

- Lead Auditor (LA).
- Auditor (A) / Auditor in Training (AiT).
- Technical Expert (TE).
- Technical Reviewer (TR).

The sectoral scope / technical area knowledge linked to the applied methodology/ies shall be covered by the assessment team.

Name	Role	SS Coverage	TA Coverage	Financial aspect	Host country experience
Mr. Sukanta Das	LA/TE	YES	YES	NA	YES
Mr. Denny Xue	TR	YES	YES	NA	NA

The detail regarding the assessment team is provided below in this report as Appendix 3

Document review

The Monitoring report version 1 submitted by the PP was reviewed against the approved methodology, registered PD, final validation report and other relevant criteria to verify the correctness, credibility, and interpretation of the presented information. Furthermore, a cross-check between information provided and information from other sources has been done. A complete list of all documents and evidence material reviewed is included in this report below in Appendix 1.

Follow-up interviews

An onsite audit was conducted by Applus+ Certification. Audit team performed interviews, telephone conferences with project stakeholders to confirm selected information and to resolve issues identified in the document review. The detail is provided in this report.

Resolution of Clarification and Corrective Action Request

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues which need to be clarified for Applus+ Certification positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR Version 02 submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two

CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Internal quality control

As final step of a verification of the final documentation including the verification report and the checklist have to undergo an internal quality control by the technical review committee, i.e. each report has to be finally approved either by the head of the technical review committee or the deputy. In case one of these two persons is part of the assessment team approval can only be given by the other one to avoid any conflict of Interest.

After confirmation of the PP the positive verification opinion and relevant documents are submitted to the VCS board through the VCS web-platform

2.2 Document Review

The details of the document observed during the verification process are listed below in Appendix 1 of this report

2.3 Interviews

No.	Interviewee			Date	Subject	Team member
	Last name	First name	Affiliation			
1.	Kumar	Narendra	PP representative	16/10/2020	Implementation of the project and monitoring. Baseline emission calculation, achieved emission reduction for the monitoring period, monitoring process followed onsite	Mr. Sukanta Das
2	Kumar	Lalit	Villager	16/10/2020	Local Stakeholder Consultations	

2.4 Site Inspections

Duration of on-site inspection: 16/10/2020				
No.	Activity performed on-site	Site location	Date	Team member
1.	Assessment team checked the implementation of the project, Baseline emission, Emission reduction calculation, technical description of the project and Monitoring. Assessment team also checked that whether the monitoring plan as described in the VCS PD is actually practised onsite. Also assessment team checked any change in host country criteria which may affect the baseline of the project activity. Assessment team also had a discussion with Local stakeholders and checked grievance register placed	The wind power project is located in Shimoga and Chitradurga Districts of Karnataka, India	16/10/2020	Mr. Sukanta Das

	onsite as per the continuous improvement measure of PP for the Local villagers.			
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2.5 Resolution of Findings

The objective of this phase of the Verification was to resolve the requests for corrective actions and clarification and any other outstanding issues from validation which need to be clarified for Applus+ Certification's positive conclusion on the Monitoring report. The Corrective Action Requests and Clarification Requests raised by Applus+ Certification were resolved during communications between the Client and Applus+ Certification to guarantee the transparency of the verification process, the concerns raised and responses given are summarized below in the Appendix 2.

The final MR Version 2 submitted by PP serves as the basis for the final assessment presented. Additional changes to the project during the verification process are not considered to be significant with respect to the main CDM/VCS objectives. The two CDM/VCS main objectives are the reduction of anthropogenic GHG emissions and the contribution of sustainable development to the host country.

Areas of validation and verification findings	No. of CL	No. of CAR	No. of FAR
Project design document and Monitoring report	00	01	00
Description of project activity	00	01	00
Application of selected baseline and monitoring methodology and selected standardized baseline			
Applicability of methodology and standardized baseline	00	00	00
Deviation from methodology	00	00	00
Clarification on applicability of methodology, tool and/or standardized baseline	00	00	00
Project boundary	00	00	00
Establishment and description of baseline scenario	00	00	00
Demonstration of additionality	00	00	00
Emission reductions	00	01	00
Calibration details	00	00	00
Monitoring plan	00	00	00
No Net harm assessment	00	01	00
Local stakeholder consultation	00	01	00
Others (please specify)	00	00	00
Total	00	05	00

The list of findings and their resolution is presented in Appendix 2 of this report.

2.5.1 Forward Action Requests

This is 2nd periodic verification of the project activity and no FAR was raised from 1st verification.

2.6 Eligibility for Validation Activities

This section is not applicable for present verification.

3 VALIDATION FINDINGS

3.1 Participation under Other GHG Programs

Project is registered under Clean Development Mechanism (CDM) with UNFCCC (Ref.:5198¹) on 26/03/2012. During the current monitoring period no CERs are issued under CDM. Assessment team has checked the UNFCCC website and found that there is no monitoring report uploaded on UNFCCC web site. PP is not claiming any benefits of carbon emission reduction credits achieved through this project activity under any other GHG programme for the monitoring period claimed under VCS. Further, PP has also given a written declaration that project has not claimed other form of GHG credit and Environmental credits for the concerned monitoring period.

3.2 Methodology Deviations

No deviation requested by PP.

3.3 Project Description Deviations

No deviation in project description requested. Hence not applicable.

3.4 Grouped Project

This is not a grouped project.

¹ <https://cdm.unfccc.int/Projects/DB/BV011315818151.57/view?cp=1>

4 VERIFICATION FINDINGS

4.1 Project Implementation Status

During the onsite audit with PP representative, it was concluded that the project is implemented as per the requirement of the registered VCS PD and approved monitoring plan. During the current monitoring period, it was observed through breakdown log sheet records onsite that no unforeseen incident/event evolved which can impact the operation of the project activity. The project underwent continuous operation and only scheduled maintenance as per the manufactures specification which is acceptable to the assessment team. Moreover, there is no unforeseen incident which can affect the applicability of the methodology and thus the same is acceptable to the assessment team.

Project location is confirmed by the assessment team through the GPS meters during onsite visit and also cross checked the same via Google software. Moreover, assessment team confirm that the latitudes and longitudes as mentioned in the registered PDD is correct. The WTG wise latitudes and longitudes are confirmed below:

Location	Easting(X)	Longitude	Northing(Y)	Latitude
TH-01	609405	76° 0' 44.99" E	1534027	13° 52' 26.52" N
TH-02	609027	76° 0' 32.44" E	1534293	13° 52' 46.13" N
TH-03	609282	76° 0' 40.96" E	1534470	13° 52' 40.95" N
TH-04	609501	76° 0' 48.28" E	1534630	13° 52' 46.13" N
TH-05	609497	76° 0' 48.18" E	1534848	13° 52' 53.22" N
TH-06	609704	76° 0' 55.10" E	1535054	13° 52' 59.90" N
TH-07	609718	76° 0' 55.60" E	1535315	13° 53' 8.39" N
TH-08	610277	76° 1' 14.26" E	1535583	13° 53' 17.04" N
TH-09	610530	76° 1' 22.71" E	1535717	13° 53' 21.36" N
TH-10	610573	76° 1' 24.22" E	1536254	13° 53' 38.84" N
TH-11	609875	76° 1' 0.98" E	1536351	13° 53' 42.09" N
TH-12	608947	76° 0' 15.12" E	1536700	13° 53' 53.64" N
TH-13	609865	76° 1' 0.70" E	1536746	13° 53' 54.95" N
TH-14	611105	76° 1' 42.02" E	1536762	13° 53' 55.29" N
TH-15	611169	76° 1' 44.19" E	1537003	13° 54' 3.13" N
TH-16	611243	76° 1' 46.69" E	1537261	13° 54' 11.52" N
TH-17	611388	76° 1' 51.55" E	1537489	13° 54' 18.92" N
TH-18	611598	76° 1' 58.58" E	1537685	13° 54' 25.26" N
TH-19	611339	76° 1' 49.97" E	1537838	13° 54' 30.28" N
TH-20	611310	76° 1' 49.04" E	1538103	13° 54' 38.91" N
TH-21	611212	76° 1' 45.83" E	1538500	13° 54' 51.84" N
TH-22	611150	76° 1' 43.81" E	1538812	13° 55' 2.01" N
TH-23	611358	76° 1' 50.80" E	1539217	13° 55' 15.16" N

TH-24	611626	76° 1' 59.75" E	1539342	13° 55' 19.19" N
TH-25	611763	76° 2' 4.30" E	1539627	13° 55' 28.45" N
TH-26	611887	76° 2' 8.52" E	1539842	13° 55' 35.43" N
TH-27	612043	76° 2' 13.74" E	1540027	13° 55' 41.42" N
TH-28	612134	76° 2' 16.82" E	1540357	13° 55' 52.15" N
TH-29	612160	76° 2' 17.73" E	1540628	13° 56' 0.09" N
TH-30	612539	76° 2' 30.40" E	1540911	13° 56' 10.12" N
TH-31	612857	76° 2' 41.10" E	1541623	13° 56' 33.25" N
TH-32	613062	76° 2' 47.97" E	1541896	13° 56' 42.11" N
TH-33	613154	76° 2' 51.07" E	1542117	13° 56' 49.29" N
TH-34	613303	76° 2' 56.09" E	1542494	13° 57' 1.50" N

Assessment team checked the commissioning certificate and confirmed that the dates of Commission for the WTGs are correct. Assessment team also confirm during the onsite visit that there is no change in project design and the project is implemented as per the description provided in the registered PDD.

The technical parameters have been verified with the name plates as well as with the technical specifications of WTGs and also cross checked from the technical manual of the Manufactures. Assessment team confirms that the technical parameters are consistent with the registered VCS PD.

The major technical specifications of the WTG v82, 1.65 MW (Vestas) are as follows:

Model	V82 – 1.65 MW
Operating data	
Rated power	1.65 MW
Tower/rotor height	78 meters
Rotor Diameter	82 meters
Cut-in wind speed	3.5 m/s
Rated wind speed	7.5 m/s
Cut-out wind speed	20 m/s(10 minute average)
Rotor swept area	5,281 sq. meters
Rotational Speed	14.4 rpm
Pitch system	Pitch regulated, electrical
Diameter	95 m
Swept area	7085 m ²
Rotor material and blades material	Epoxy/balsa wood/glass fiber, steel Regulation Active Stall
Generator	1-speed, water cooled
Rated output	1,650 kW
Rotational speed at rated power	1,012 rpm
Operating voltage	3 x 690 V
Frequency	50 Hz

Insulation class	F/B
Cooling system	Oil cooler/Radiator: Cooling capacity 37.5 kW Water cooler/Radiator: Cooling capacity 46.2 kW
Gear Box	1. Step planet, 2. Step helical
Gear Ratio	1:70.2
Nominal load Gearbox Mechanical power	1.800 kW
Yaw Drive System	Ball bearing, internal gearing
Yaw bearing	Hydraulic disk brake

The operation and maintenance (O & M) of the project activity is being done by the O & M team of the company. The same has been verified with the interview with O & M team during the site visit.

The assessment team confirmed through onsite visit with PP representative that there is no proposed or actual change to the project design during this monitoring period. It was observed that the monitoring plan was implemented as per the registered VCS PD and applied methodology ACM0002, Version 12.1.0. The organisational role and responsibility as mentioned in the registered VCS PD is followed onsite. Meters are calibrated as per calibration frequency in registered VCS PD. All the emergency preparedness as mentioned in the registered VCS PD is followed onsite and no discrepancies were found regarding the same.

Further, Project is registered under Clean Development Mechanism (CDM) with UNFCCC (Ref.:5198) on 26/03/2012. During the period no CERs are issued under CDM. Assessment team has checked the UNFCCC website and confirmed the same. PP is not claiming any benefits of carbon emission reduction credits achieved through this project activity under any other GHG programme for the monitoring period claimed under VCS. Moreover, the project has not generated any other form of environmental credit and a declaration for the same has been submitted to the assessment team and the same is acceptable.

The assessment team observed that the project is implemented in accordance with the registered VCS PD, final validation report and approved methodology and thus no clarification/deviation is sought. CAR 01, CAR 03 and CAR 04 were raised related to implementation of project activity during the verification process and closed successfully. Please refer below Appendix 2 for the detail closure of the CARs.

Assessment team confirms following during the verification site visit:

1. Start date of the project is 29/07/2011. which is the date of commissioning of the WTGs No. TH-18, TH-19, TH-22, TH-23, TH-24, TH-25, TH-26, TH-27, TH-28, TH-29, TH-30, TH-31, TH-32, TH-33 and TH-34 WTG as per commissioning Certificates.

2. An undertaking letter has been submitted by PP for double counting with any other GHG program. PP also has given a written declaration that project has not claimed other form of GHG credit for the concerned monitoring period.

3. Assessment team confirms that this is the 2nd monitoring under VCS and covers the activity from 01/04/2012 to 31/03/2018 (inclusive of both dates). Thus, VCS crediting period start from 29/07/2011 and 28/07/2021 will be the end date of the crediting period.

The GHG credits from 01/04/2012 to 31/03/2018 will be claimed under VCS only. At any point of time during the crediting period, the project proponent will abide by the "Double Counting".

4. Assessment team checked and found that the Project proponent of the project activity is as below for the current monitoring period:

Organization name	Tuppadahalli Energy India Pvt. Ltd
Contact person	Mr. Jagannath Sahoo
Title	Head of Finance
Address	C1-001, Tower C, The Millennia, No.1 &2, Murphy Road, Ulsoor, Bangalore- 560008, Karnataka, India
Telephone	+91 8041557102
Email	jsahoo@acciona.com

5. Assessment team also checked the details of other entity and found that Other entity involved in this project is

Organization name	Kosher Climate India Private Limited
Contact person	Vamsi Krishna M
Title	CAB Head
Address	#109, 2nd Floor, 27th Main, Sector – 1, HSR Layout, Bangalore-560102, India
Telephone	011- 30501110-03
Email	vamsi@kosherclimate.com

6. The quantified emission reduction calculation for the monitoring period is correct and conservative. Assessment team also compared actual VER with the estimated VER and found that the actual VER is 743,544 tCO₂e which is 3.8% lower than the estimated emission reduction 773,207 tCO₂e (128,809 tCO₂e/ 365 days* 2191days) during this

monitoring period which is due to lower wind flow pattern and low PLF attained by the wind power plant during the current monitoring period.

Ministry of Environment & Forests, Government of India has stipulated following indicators for sustainable development in the interim approval guidelines for GHG projects.

1. Social well-being
2. Economic well-being
3. Environmental well-being
4. Technological well-being

Social and Economic well-being: The project activity lead to direct and indirect benefits to the region through the generation of local employment in areas in and around the project activity, and the improved conditions for developing economic activities, which may result from the empowerment of vulnerable sections of society dwelling near the project area due to the creation of employment opportunities. The project activity supplies electricity to the grid and this ultimately benefited the local communities with improved power supply and in this case this power supply is renewable, hence assisting in the quest for energy security of the current and future generations.

Environmental well-being

Wind power is one of the cleanest renewable energy powers and does not involve any fossil fuel. There are no GHG emissions. The impact on land, water, air and soil is negligible. Thus the project activity contributes to environmental well-being without causing any negative impact on the surrounding environment.

Economic well-being

The VCS project activity generates permanent and temporary employment opportunity within the vicinity of the project. The electricity supply in the nearby area improves which directly and indirectly improves the economy and life style of the area.

Technological well-being

The project activity is step forward in harnessing the untapped wind energy and further diffusion of the wind technology in the region. The project activity leads to the promotion and demonstrates the success of wind projects in the region which further motivate more investors to invest in wind power projects. Hence, the project activity leads to technological well-being.

In view of the above, the PP has considered that the project activity profoundly contributes to the sustainable development.

VEERA comments number 01: With the development and release of the *VCS Standard, v4.0*, Verra articulated its position that certain project types in certain contexts have moved beyond their need to be supported by carbon financing. The rationale and logic behind this position was described in consultations held in May 2018 and in June 2019.

In this particular case, Verra acknowledges the current registered status of this project and the additionality demonstration in the project description. However, given how the project has not issued VCUs since 2012, Verra remains concerned about the additionality of the project.

The project proponent is requested to provide additional justification and elaboration on the project's need for carbon finance and how the project has operated without carbon finance since the last VCU issuance on 13 December 2012. The VVB is requested to assess the updates and update the verification report, as needed.

VVB response:

As per the registered CDM PDD, the IRR of this project activity is 9.31% which is below than the selected benchmark of 14.08 %. So, PP has considered carbon revenue to improve the project profitability and registered the project under CDM. It shall be noted that the actual project cost increased by 3% and the actual PLF reduced by 20% compared the values considered in the registered PDD. With the consideration of actual project cost (3,491.92 Mn INR) and actual generation (109.754 Mn kWh –annual average generation since commissioning), the IRR further comes down to 4.71% against the bench mark of 14.08%. Hence it is clear that the project is not financially attractive even in the actual case.

PP has claimed pre-CDM credits under VCS. However, PP's main intension was to claim CERs under CDM as the prices of the CERs were better which will help to improve the financials considerably.

The project is registered with UNFCCC on 26th March 12. But after the year 2012, the CER price have crashed into 0.1 - 0.2 USD/CER. Also the demand for CER has come down drastically. Even in the year 2019, the CER price ranged from 0.15 – 0.24 USD² and the CERs retired is only about 60% of the issued CERs. Since the verification involved high cost including CER issuance fee (ie, 0.2 USD/CER), verification cost and consultancy cost, PP will incur additional loss as the revenue from the CER revenue may not even cover the costs involved. As PP has already incurred high cost in registration, PP does not wish to incur additional cost in verification in the uncertain market condition. Hence, PP has not gone for verification since the registration of the project activity. It shall also be noted that once the power plant is commissioned, the project cannot stop the operation as PP has already incurred huge the capital cost with the help of bank loan which needs to be repaid. Hence, only option PP has is to run the project but with lower returns until PP get the better carbon revenue.

² World bank report: State and Trends of Carbon Pricing 2020 (page 59)

<https://openknowledge.worldbank.org/bitstream/handle/10986/33809/9781464815867.pdf?sequence=4&isAllowed=y>

However, with the concern about low profitability over the years and the fact that carbon market prices are improving due to the Paris Agreement coming in to effect, PP has now taken the various steps to obtain carbon revenue as it is crucial for them. The steps taken by PP are given below:

- Renewed the CDM crediting period (renewal date 13th May 20)
- Applied for Gold Standard registration (GS7754)
- Undertaken verification of the project under VCS for the older vintages
- Signed ERPA to sell the VCU

PP is considering all the possible option to get the carbon revenue.

From above justification, it is clear that the carbon revenue is vital to improve the project financials and PP has taken steps to obtain the same.

4.2 Safeguards

4.2.1 No Net Harm

No potential environment or socio-economic matter was found during the site visit. The project is renewable energy project and thus no negative impact observed onsite.

The project activity promotes environmental and socio-economic well-being as it results in zero GHG emissions due to installation and operation of clean, renewable energy technology for electricity generation. The report on “Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE dated September 2013³. This report clearly mentioned that solar/Wind power project activity operations do not result in direct air pollution, noise pollution. Moreover, also as per the Central Pollution Control Board of India notification⁴ solar/wind project falls under White Category and are practically non-polluting.

4.2.2 Local Stakeholder Consultation

Local stakeholder consultation has been conducted at the time of project registration. For on-going stakeholder’s communication, PP have maintained feedback/complaint register at the site office. All the stakeholders are happy with the implementation and operation of the project activity and no negative comments envisaged for the project activity. Complaint/grievances feedback form has been kept at site as a part of ongoing communication with stakeholders in line with clause 3.16.17 of VCS Standard, ver. 4.0 and appropriate actions taken time to time by PP.

³ <https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf>

⁴ http://envfor.nic.in/sites/default/files/Latest_118_Final_Directions.pdf

Assessment team checked the grievance register provided by PP and found that local stakeholders can anytime lodge their grievances if any in the register over the operational life time of the project. During current monitoring period no grievance was received. Thus, assessment team is of the opinion that the ongoing stakeholder mechanism is adequate and appropriate.

4.3 AFOLU-Specific Safeguards

This section is not applicable as this project activity is a non-AFOLU project activity.

4.4 Accuracy of GHG Emission Reduction and Removal Calculations

Means of verification	The verification team assessed whether the data and calculations of GHG emission reductions achieved resulting from the VCS PD. The verification team has checked whether calculations of baseline GHG emissions, project GHG emissions and leakage GHG emissions have been carried out in accordance with the formulae and methods described in the monitoring plan of the VCS PD
Findings	CAR 05 was raised during the verification process and closed successfully. Please refer Appendix 2 of this report for the detail closure of the CAR.
Conclusion	The baseline Emissions for a given year is calculated by multiplying the energy baseline (EB) with the regional grid emission factor. Formula Used:- Baseline emission: $BE_y = E_{BL,y} \times EF_{CO_2,grid,y}$ Where, BE_y = Baseline Emissions in year y; tCO₂ $E_{PJ,y}$ = Net quantity of electricity exported to the grid by the project activity during the year y (MWh) $EF_{CO_2,grid,y}$ = Combined margin CO₂ emission factor for grid connected power generation in year y calculated using the “Tool to calculate the emission factor for an electricity system” (tCO₂/MWh) Ex-ante parameters: The baseline emission factors are taken ex-ante in line with the registered VCS PD as well as cross checked with section validation report and found correct. Combined margin CO₂ emission factor of NEWNE grid ($EF_{CO_2,grid,y}$) is equal to 0.9445 tCO₂/MWh. The calculation approach was in line with the VCS PD. Values are as follows: $EF_{grid,OM,y} = 0.9867 \text{ tCO}_2/\text{MWh}$ $EF_{grid,BM,y} = 0.8179 \text{ tCO}_2/\text{MWh}$ $EF_{grid,CM,y} = 0.9445 \text{ tCO}_2/\text{MWh}$ Ex-post parameter:

	As per the registered VCS PD and monitoring plan, EG_y (Net quantity of electricity exported to the grid by the project activity during the year y) in MWh. EG_y (Net quantity of electricity exported to the grid by the project activity during the year y): Net electricity exported to grid is to be calculated on the basis of the difference between “export” and “import” recorded in meter installed at the substation in Line 1 and Line 2. The net electricity export to the grid is sourced from the 1. Form -B which determined the joint meter statement. It was observed by the assessment team that there is mismatch in calculation of net electricity exported to grid in 1. Form-B and Invoices. Hence, PP has used conservative value (minimum) of net electricity export to grid for calculation of emission reductions, thus hence acceptable to assessment team. The verification team has checked the entire monthly 1. Form-B(JMRs) reports for the net electricity exported to the grid and crosschecked the same with the invoices raised by PP to the state Utilities for the monitoring period. The net electricity exported to the grid as per 1. Form B(JMR) is 787,608.85 MWh and as per Invoice it is 787,238 MWh. PP has taken the 787,238 MWh i.e. invoice value for calculating emission reductions which is conservative value. Hence acceptable to assessment team. All relevant monitoring parameters have been verified with regard to the appropriateness of the applied measurement/determination method, the correctness of the values applied for ER calculation, the accuracy, and applied QA/QC measures. Baseline emission factor is calculated as combined margin, consisting of a combination of operating margin (OM) and build margin (BM) factors. BE_y baseline emissions, tCO₂e BE_y = 787,238 MWh x 0.9445 tCO₂e/MWh = 743,544 tCO₂e (rundown values) As per applied methodology ACM0002, version 12.1.0 and the registered PD, project emission is considered zero as the project activity involved wind power generation. Leakage: As per applied methodology ACM0002, version 12.1.0 and registered PDD Leakage emissions are not considered for the project activity. Hence, ER_y= BE_y- PE_y= 743,544 tCO₂e- 0= 743,544 tCO₂e (rundown values) Verification team confirms that the monitoring has been carried out in accordance with the monitoring plan contained in the registered VCS PD.
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4.5 Quality of Evidence to Determine GHG Emission Reductions and Removals

Means of verification	The verification team checked the Calibration details of the monitoring meters with the calibration certificates.
Findings	No finding raised in this section.
Conclusion	The metering is being carried out by electronic tri-vector bi-directional energy meter of accuracy class 0.2s(main & check) which measured both export and import at state electricity board substation. This electricity meter is being used by state electricity board for 1.Form -B (Joint Meter Reading) electricity generation statement. The meters are monitored continuously and cumulative readings are taken at the end of the month by joint meter reading procedures. All the energy meters are under the control of state utility These are sealed by the state Unitalities. The calibration frequency of meters is annually. The Calibration details of meters are provided in Appendix 5. No delay in Calibration is observed by the assessment team for the current monitoring period. The meters are calibrated by the NABL accredited lab. Assessment team checked the calibration details of the monitoring meters with calibration certificates submitted by PP and confirms that meters are calibrated as per calibration frequency mentioned in the registered VCS PD. Calibration details are provided in Annexure -5 of this report. No unforced error observed and feeder wise WTGs location is also checked and found correct. Assessment team confirms that the energy meters are made of L & T of accuracy class of 0.2s, are calibrated as per the national standards followed by the electricity board. Assessment concludes that the development and maintenance of records and reporting procedures are in accordance with the monitoring plan. All the evidence like commissioning certificates, JMRs, invoices and document listed in Appendix 1 of this report is correct and no mismatched were obtained for the documents submitted. The emission reduction calculation is conservative and therefore assessed to be correct for the current verification.

4.6 Non-Permanence Risk Analysis

No.	Risk that could lead to material errors, omissions or misstatements	Assessment of the risk		Response to the risk in the verification plan and/or sampling plan
		Risk level	Justification	
NA	NA	NA	NA	NA

5 VERIFICATION CONCLUSION

Applus+ Certification has been engaged by Tuppadahalli Energy India Pvt. Ltd. to perform the 2nd periodical verification of the “Tuppadahalli Wind Energy Project”

The Wind Energy project in Karnataka is responsible for the preparation of the GHG emissions data and the reported GHG emissions reductions on the basis set out within the project’s Monitoring Plan in the registered VCS PD and the applied methodology ACM0002, Version 12.1.0.

Our verification approach was based on the requirements as defined under the Kyoto Protocol, Marrakesh accord, as well as those defined by the CDM Executive Board. Our approach is risk-based, drawing on an understanding of the risks associated with reporting GHG emissions data and the controls in place to mitigate these. Further, the verification has been planned and organized to achieve a Reasonable Level of assurance as per the requirement of VCS. No sampling procedure applied for site visit or document verifications. The entire documents checked/Power plant verification conducted to arrive at positive verification conclusions. The verification team can confirm that:

- the project is operated as planned and described in the project document;
- the monitoring plan is as per the applied methodology;
- the monitoring process in Monitoring Report is as per the PD
- the development and maintenance of records and reporting procedures are in accordance with the monitoring plan;
- the installed equipment being essential for generating emission reduction runs reliably and is calibrated appropriately;
- the monitoring system is in place and generates GHG emission reductions data;
- the GHG emission reductions are calculated without material misstatements.
- A Reasonable Level of assurance was achieved as planned during verification process.
- Verification period: 01/04/2012 to 31/03/2018(inclusive of both days)

Verified GHG emission reductions and removals in the above verification period:

Year	Baseline emissions or removals (tCO ₂ e)	Project emissions or removals (tCO ₂ e)	Leakage emissions (tCO ₂ e)	Net GHG emission reductions or removals (tCO ₂ e)
2012*	111,261	0	0	111,261
2013	134,330	0	0	134,330
2014	122,000	0	0	122,000
2015	111,670	0	0	111,670
2016	126,066	0	0	126,066
2017	118,988	0	0	118,988

2018**	19,229	0	0	19,229
Total	743,544	0	0	743,544

* From 01-April-2012 to 31-December-2012

**From 01-January 2018 to 31-March-2018

APPENDIX 1: DOCUMENTS REVIEWED OR REFERENCED (VERIFICATION)

No.	Author	Title	References to the document	Provider
1	NA	Commissioning certificates of the WTGs	Commissioning certificates	Project participant
2	NA	Contract of the project participant with the DOE	Contract document signed between PP and DOE	Project participant
3	NA	The operational lifetime of the project activity from the manufacturer = (Technical specifications)	Manufacturer technical specifications	Project participant
4	NA	Registered VCS PD	https://registry.verra.org/app/projectDetail/VCS/924	Project participant
5	NA	Calibration Certificates of energy meters	Calibration Certificates	Project participant
6	NA	Emission reduction sheet version 01	ER sheet version 01 dated 01/12/2020	Project participant
7	NA	Emission reduction sheet version 02	ER sheet version 02 dated 29/12/2020	Project participant
8	NA	MR version 01	01/12/2020	Project participant
9	NA	MR version 02	29/12/2020	Project participant
10	NA	Power Purchase Agreement (PPA)	PPA	Project Participant
12	NA	1st Periodic Verification Report	Version 01, dated 06/07/2010	Project participant
14		Final VCS validation report	Version 01, Dated 06/10/2012	Project participant
15	NA	Tools/ guidelines used in the project activity - Glossary of CDM terms version 07 - VCS verification report template version 4.0	UNFCCC CDM/VCS web site	UNFCCC
16	NA	Monthly statement- JMR for the complete monitoring period	Monthly statement of electricity export and Import	Project participant
17	NA	Invoices for the complete monitoring period	Invoice	Project participant
18	NA	Declaration regarding no participation in other GHG program for the concerned monitoring period	-	Project participant

19	NA	Break Sown records	NA	Project participant
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APPENDIX 2: CORRECTIVE ACTION REQUESTS, CLARIFICATION REQUESTS AND FORWARD ACTION REQUESTS (CAR/CL/FAR)

Project Implementation Status

CAR ID	01	Date: 28/12/2020
Description of CAR		
During review of Monitoring report DOE found that the following information's are missing in monitoring report; 1. Technical specification of WTG is not provided in monitoring report 2. Breakdown details of the WTGs are missing in the MR. Moreover, the supporting document like "plant logbook" regarding the breakdown details are not provided to the assessment team. Corrective action is sought.		
Project participant response		Date: 29/12/2020
1. The technical specification of the WTG is now included in the monitoring report. 2. During the monitoring period the WTGs were operational continuously without any major breakdown. The same is mentioned in the MR.		
Documentation provided by project participant		
Revised MR		
DOE assessment		Date: 30/12/2020
1. Technical specifications of the WTG is now included in Section 3.1 of revised MR. Hence OK. 2. PP confirmed that there was no major breakdown during the current monitoring period. The same was verified with the plant records during the site visit. Hence OK. CAR closed.		

CAR ID	02	Date: 28/12/2020
Description of CAR		

During the review of documents submitted by PP, it was found that the following documents are missing;

1. Technical specification of the WTGs
2. O & M Agreement
3. Power Purchase agreement
4. Supporting document of commissioning dates of WTG
5. Undertaking in effect of no double counting of VCS emission reductions achieved will take place in other GHG Programs/Other forms credits for the concerned Monitoring period.

PP is requested to provide the above documents to assessment team.

Project participant response

Date: 29/12/2020

1. Technical specification of the WTG is submitted
2. Since PP have in-house O&M team, the O & M Agreement is not applicable
3. Power Purchase agreement is submitted
4. Commissioning Certificates are submitted as supporting documents for commissioning of WTG
5. Undertaking letter in effect of no double counting of VCS emission reductions achieved will take place in other GHG Programs/Other forms credits for the concerned Monitoring period has been submitted

Documentation provided by project participant

1. Technical specification of the WTGs
2. Power Purchase agreement
3. Commissioning Certificate
4. Undertaking letter.

DOE assessment

Date: 30/12/2020

1. PP has provided technical specification of the WTGs. The project activity consists of Vestas Wind Technology India private Limited make WTGs of 1650 kW respectively. The Wind Turbine Generators (WTGs) are Vestas V82 Class IIA turbines. Assessment team confirms that the technical specifications of WTGs are consistent with the registered VCS PD and registered CDM PDD. **Hence OK.**

2. PP has submitted the copy of PPA now, Assessment Team confirms that the PPA was signed with Mangalore Electricity Supply Company (MESCOM) on 02/05/2011. **Hence OK.**

3. PP has now submitted the commissioning certificates of all WTGs. Assessment team has verified the commissioning dates with the certificates and confirmed that commissioning dates are correct and the same is given below:

WTG Nos	Capacity	Commissioning Date
TH-1, TH-2, TH-3, TH-4, TH-5, TH-6, TH-7, TH-8 & TH-12	14.85 MW	22/10/2011

TH-9, TH-10, TH-11, TH-13, TH-14, TH-15, TH-16, TH-17, TH-20 & TH-21	16.5 MW	28/09/2011
TH-18, TH-19, TH-22, TH-23, TH-24, TH-25, TH-26, TH-27, TH-28, TH-29, TH-30, TH-31, TH-32, TH-33 & TH-34	24.75 MW	29/07/2011

4. PP has submitted an undertaking letter in effect of no double counting of VCS emission reductions achieved will take place in other GHG Programs/Other forms credits for the concerned Monitoring period has been submitted. Hence OK.

CAR closed.

Not Net Harm

CAR ID	03	Date: 28/12/2020
Description of CAR		
Supporting documents are not shared with DOE related to claim made under “No Net Harm” in MR against the requirement of sub para 3.16.1 of VCS standard.		
Project participant response		Date: 29/12/2020
Additional justification with supporting evidence are now provided in the MR.		
Documentation provided by project participant		
Revised MR		
DOE assessment		Date: 30/12/2020
PP has updated “No Net Harm” in section 2.1 of revised MR. Wind power projects are not included in the Schedule I of the EIA notification S.O.1533 (E) dated 14thSeptember 2006 and thus an EIA is not required. Further, As per the report ‘Developmental Impacts and Sustainable Governance Aspects of Renewable Energy Projects” prepared by MNRE (https://smartnet.niua.org/sites/default/files/resources/report-on-developmental-impacts-of-RE.pdf) , the environmental and social impacts of the wind power projects are mostly positive. The minimal impact on the environmental and social impacts of wind projects are mitigated through different laws in India. Thus CAR closed .		

Local stakeholder consultation

CAR ID	04	Date: 28/12/2020
Description of CAR		
Supporting documents of local stakeholders including mechanism for ongoing communication with Local Stakeholder as per requirement of Para 3.16.3 and 3.16.4 of the VCS standard V.4.0.		
Corrective action is sought.		
Project participant response		Date: 29/12/2020
The supporting documents of local stakeholder mechanism are checked by validating DOE during the validation. For ongoing communication, PP has kept the grievance forms at the site office. Any stakeholder can visit the site and provide their feedback/grievances in the form. But no grievances received during the monitoring period. The copy of grievance form is now submitted to DOE for verification.		
Documentation provided by project participant		
Grievance form		
DOE assessment		Date: 30/12/2020
PP has now provided the supporting document (grievance form) to assessment team for ongoing communication with the stakeholders kept at the site office where any stakeholder can visit the site and provide their feedback/grievances in the form. Assessment team had checked during the site visit and found that no grievances were received during the monitoring period. Thus CAR is closed .		

Accuracy of GHG Emission Reduction and Removal Calculations

CAR ID	05	Date: 28/12/2020
Description of CAR		
During the review of MR and ER sheet assessment team has observed following:		
1. PP has not mentioned the cross-check procedure of net electricity exported to grid in ER sheet		
2. Inconsistencies in net electricity exported to grid data between JMRs and Invoices		
Corrective action is sought.		
Project participant response		Date: 29/12/2020
1. PP has now included crosschecking procedure in the ER sheet.		
2. KPTCL considers 15% additional import as a charge for exporting electricity to the power		

plant. This can be clearly written in the invoice (ie, 115% of import). Due to the reason, the net export in the JMR & invoice are not matching. As conservative option, now the net electricity value provided in the invoice (ie, Export – 115% of import) has been considered for the Emission Reduction calculation.	
Documentation provided by project participant	
Revised ER sheet.	
DOE assessment	Date: 30/12/YYYY
1 The cross-check procedure is now added in the ER sheet. Hence OK. 2. It was found from Invoices that KPTCL considers 15% additional import as a charge for exporting electricity to the power plant. In invoices, additional 115% of import electricity has been deducted from net electricity exported to grid by the project. Due to the reason, the net export in the JMR & invoice are not matching. PP has considered export–115% of import for calculation of emission reduction calculation which is conservative. Hence acceptable to assessment team. Thus CAR is closed.	

APPENDIX 3: COMPETENCE OF TEAM MEMBERS AND TECHNICAL REVIEWERS

Verification team member

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)	Involvement in			
						Desk review	On-site inspection	Interview(s)	Verification findings
1.	Lead Auditor/Technical Expert	OR	DAS	SUKANTA	TQC-Outsourced entity	Yes	Yes	Yes	Yes

Technical reviewer and approver of the verification and certification report

No.	Role	Type of resource	Last name	First name	Affiliation (e.g. name of central or other office of DOE or outsourced entity)
1.	Technical reviewer (TR)	EI	Xue	. Denny	Applus+ Certification
2.	Approver	IR	Sendin	Juan	Applus+ Certification B.U. Managing Director

Short CVs of the Team:

1. **Mr. Sukanta DAS**, has done M. SC in (Electronics and Photonics) and M. Tech in (Energy technology) from Tezpur Central University/ Indian Institute of technology Bombay in India. He is a certified lead auditor for ISO 14001 EMS LA and ISO 9001 QMS LA from International registry for Certified Auditors (IRCA) and Certified Lean Management practitioner from Quality Council of India (QCI). He has more than Nine (9) years of working experience at TUV NoRD/ Re-consult/CRA/APPLUS certifications under various categories of projects stating from Renewable to

waste to supercritical projects. He was JI/ CDM Lead Assessor in TUV NoRD and was involved in more than 100 CDM validation and verifications activities in Gold Standard, VCS, CDM projects as a team leader/technical reviewer / validator / verifier covering the sectoral scope 1, 13 technical areas 1.2/1.1/13.1. Currently he is associated with True Quality Certifications Private Limited and is empanelled with APPLUS certification to carry out GHG audit

2. **Mr. Denny Xue** (Master Degree in Environmental Engineering, Bachelor Degree in Thermal Engineering) is an Auditor appointed by Applus+ LGAI for the GHG project assessment. He is based on Shanghai. He has 1.5 years of work experiences in CDM project development. Before he joined Applus+ LGAI, he has been worked for Shanghai Chuanji Investment and Management which is a CDM consultancy company as a project manager for CDM project development.

APPENDIX 4: ABBREVIATIONS

Abbreviations	Full texts
BM	Build Margin
CAR	Corrective Action Request
CDM	Clean Development Mechanism
CER	Certified Emission Reduction(s)
CEA	Central Electricity Authority
CL	Clarification request
CM	Combined Margin
CMS	Central Monitoring system
CO ₂	Carbon dioxide
CO ₂ e	Carbon dioxide equivalent
DNA	Designated National Authority
DOE	Designated Operational Entity
DR	Document Review
EF	Emission Factor
EIA	Environmental Impact Assessment
ER	Emission Reductions
FAR	Forward Action Request
GHG	Greenhouse gas(es)
GWP	Global Warming potential
RBI	Reserve Bank Of India
PP	Project Participant

APPENDIX 5: CALIBRATION DETAILS OF THE METERS

Meter	Calibration date	Validity
Main: Line 1 – 09142619 (L&T Make & 0.2s Accuracy class) Line 2 – 09142471 (L&T Make & 0.2s Accuracy class) Check: Line 1 – 09142591 (L&T Make & 0.2s Accuracy class) Line2 - 09142447 (L&T Make & 0.2s Accuracy class)	14/03/2012	13/03/2013
	01/06/2012	31/05/2013
	07/09/2012	06/09/2013
	14/12/2012	13/12/2013
	02/04/2013	01/04/2014
	10/07/2013	09/07/2014
	18/11/2013	17/11/2014
	14/03/2014	13/03/2015
	23/05/2014	22/05/2015
	08/08/2014	07/08/2015
	13/11/2014	12/11/2015
	10/02/2015	09/02/2016
	25/05/2015	24/05/2016
	01/09/2015	31/08/2016
	28/12/2015	27/12/2016
	05/04/2016	04/04/2017
	06/07/2016	05/07/2017
	27/09/2016	26/09/2017
	15/12/2016	14/12/2017
	01/03/2017	28/02/2018
	29/06/2017	28/06/2018
	28/10/2017	27/10/2018
	19/01/2018	18/01/2019