



Verified Carbon Standard

A VERRA STANDARD

INDEPENDENT EXPERT REPORT

Methodology Title	M0333 REVISION TO ACM0002 GRID-CONNECTED ELECTRICITY GENERATION FROM RENEWABLE SOURCES
Version	Final version
Sectoral Scope(s)	Scope 1
Document Reviewed	M0333
Date of Issue	2 September 2025
Expert Assessor	Javier Castro
Contact	Kranav Sharma

1 INTRODUCTION

Verra is managing the development of a major revision to the ACM0002 methodology titled *Revision to ACM0002 Grid-connected Electricity Generation from Renewable Sources (M0333)*. Per section 3.5 of the *Methodology Development and Review Process, v5.0*, this methodology will be subject to independent expert review.

Based on their experience in the fields of renewable energy and global (voluntary) carbon markets, Verra hired Javier Castro to provide an expert assessment of the proposed methodology. The expert assessor's assessment focused on (in line with the signed contract):

- Assessment of whether the latest draft methodology reflects the most recent scientific knowledge and best practices in the fields of renewable energy and global (voluntary) carbon markets, particularly related to the following aspects:
 - suitability of the proposed geographic expansion in the methodology, considering:
 - it is a departure from Verra's 2019, more restrictive approach (RE was only eligible in LDCs as defined by the UN),
 - the historical growth of (or lack thereof) RE in low, low-middle, and upper middle-income economies as defined by the World Bank, and
 - the larger implications this might have for Verra and the global carbon market landscape.
 - whether the proposed geographic expansion, coupled with potential CCP labelling of this methodology, would help stimulate demand amongst buyers for carbon credits generated by this methodology.
- Whether all stakeholder comments have been appropriately responded to and/or addressed in the latest draft methodology, as applicable.
- Any other aspect(s), not covered above, that the independent expert deems important based on their reading of the latest draft methodology.

2 REVIEW APPROACH & FINDINGS

The independent experts reviewed the draft methodology that was published for the public consultation and provided feedback to Verra. Verra prepares responses to the expert assessor's findings and updates the methodology accordingly. The independent experts review the responses and provide confirmation that the planned updates address the findings. See section 6 for detailed expert review feedback.

3 REVIEW CONCLUSION

Javier Castro has completed the expert review of the draft *Revision to ACM0002 Grid-connected Electricity Generation from Renewable Sources (M0333)* and confirms that the draft methodology, and proposed updates adhere to the criteria established under the condition that following FAR is implemented:


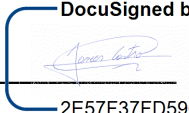
“FAR: *considering that the usage of the conservative value of 1.3 will affect BESS and PSP cases, which are both limited in scope and relatively uncommon, the incorporation of this conservative approach in the VT0011 should be done with the next revision of the tool.*“.

4 EXPERT QUALIFICATIONS

A detailed list of Javier Castro employment, education and qualifications, and research publications is submitted per email together with this report.

5 SIGNATURE

Signed for and on behalf of:

Name of entity:	Independent Consultant	DocuSigned by:
Signature:		
Name of signatory:	JAVIER CASTRO	2E57F37FD5964CC...
Date:	22.04.2026	

6 EXPERT FEEDBACK

Section – Description of the Section			
#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
1	This methodology revision expands the geographic eligibility of project activities and replaces key CDM tools with Verified Carbon Standard (VCS) tools.	<p>The latest version of the ACM002 (version 22.0) has no geographic constraints; therefore, this revision includes constraints compared to the ACM002. The expansion relates to the VCS standard, which is relevant not only for this methodology. This revision creates a constraint on geographic eligibility compared to the ACM002. It also creates conditions that differ from those established in the VCS standard.</p> <p>However, the VCS standard requirements prevail over the methodology requirements. These changes cannot be implemented until the standard is changed.</p>	<p><u>Rd 1 response:</u></p> <p>Introduction of the geographic constraints is a key element of this proposed revision to ACM002 methodology (and is a major reason for developing this revised methodology).</p> <p>Along with this change in the methodology and for the sake of consistency in our rules, corresponding changes in the VCS Standard (specifically Table 1) are proposed to be enacted. These rule changes would allow methodologies to complement the rules for eligible project activities and specify geographic applicability conditions – these rule changes were published for stakeholder feedback. Please refer to the public consultation document (Section 3.1.2, pg 65) for further details.</p> <p>This gives methodologies precedence (grants them a higher hierarchy) in the matter related to geographic eligibility of projects. Specifically for grid-connect RE project, the update states that:</p> <p><i>Where no geographic applicability conditions are described in the applied methodology, only small-scale activities (e.g., wave, tidal, salinity gradient, and ocean thermal energy are eligible, and only in LDCs.</i></p> <p>As the proposed methodology does provide a geographic applicability condition, it takes precedence over the VCS rules in Table 1 thus avoiding any conflict between the two documents.</p>
		<u>Rd 2 comment:</u>	<u>Rd 2 response:</u>

Section – Description of the Section

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
		<p>The response refers to a public consultation document, not to the approved requirements. Hence the original comment is still valid “<i>These changes cannot be implemented until the standard is changed.</i>”</p>	<p>Please note that both the Table 1 changes (as part of the revised VCS Standard) and the proposed methodology (ACM0002 revision) are intended to be released simultaneously by end of this year. This will remove any inconsistency between standard and methodological requirements. Under no circumstances will the revised methodology be released earlier than the revised Table 1/VCS Standard.</p>
		<p><u>Rd 3 comment:</u> based on the response given the issue is accepted and closed</p>	<p><u>Rd 3 response:</u></p>

Section 3 - Definitions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update

Section 4 – Applicability Conditions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
2	First bullet point	<p>The VCS standard uses the LDC definition, which is a United Nations classification that only changes after several years, if at all. The</p>	<p><u>Rd 1 response:</u></p>

Section 4 – Applicability Conditions			
#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
		<p>proposed revision, however, uses the World Bank country classification, which is updated annually. Consistency is needed between the different VCS documents. Additionally, this sentence implies that this methodology requirement has a higher hierarchy than the requirements of the VCS standard (Table 1). This possibility is not currently available in the VCS standard, so it is not applicable.</p>	<p>Please refer to our response to Finding 1 above. As mentioned above, the VCS Standard (Table 1) will be revised in accordance with this proposed change in the methodology.</p>
		<p><u>Rd 2 comment:</u> See response to Finding 1</p>	<p><u>Rd 2 response:</u> See response to Finding 1</p>
		<p><u>Rd 3 comment:</u> Accepted and closed</p>	<p><u>Rd 3 response:</u></p>
3	Second bullet point	<p>The proposed revision restricts the applicability conditions under §7 to (e).</p> <p>This does not take into account comment 29; the reason for not including it is that additionality is difficult to demonstrate, which is a project issue rather than a methodological one.</p>	<p><u>Rd 1 response:</u></p> <p>This restriction has been instituted to maintain the “prior consideration” aspect of additionality. More specifically, where both the power plant and the BESS are not part of the same investment decision or existing in the same location, it is hard to demonstrate whether carbon finance was seriously considered during project development and implementation.</p> <p>Also, to a lesser extent, installing the BESS in a location separate to the power plant does not seem to be an effective way of operating an integrated BESS-power plant system (for instance, it would lead to more transmission losses).</p> <p>Additionally, we are currently working on a BESS methodology (CNO157) with a broader scope and wider applicability, which is expected to address the limitations introduced by the stated requirement.</p> <p>So, based on the above reasons, we believe that this requirement should be kept in the methodology.</p>

Section 4 – Applicability Conditions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
		<p><u>Rd 2 comment:</u></p> <p>Considering the intention of creating a new methodology, that would cover the restriction created, this approach is acceptable.</p> <p>Finding can be considered closed.</p>	<p><u>Rd 2 response:</u></p> <p>Thank you for your response.</p>
4		<p>Some stakeholders have requested the inclusion of additional applicability conditions, specifically comments 3, 9 and 15.</p>	<p><u>Rd 1 response:</u></p> <p>We did not think these comments merit incorporation as applicability conditions or as any other elements in the proposed methodology. The reasons are as follows:</p> <p>We strongly believe that there are regions in the developing world (upper-middle income economies and lower) which are underserved by (grid-connected) renewable energy technologies and where carbon finance can help bridge the viability gap and stimulate greater market penetration, thereby catalyzing the clean energy transition. Additionally, our risk-based project review framework is comprehensive and robust enough (covers pt 3 and 4 in comment 15) to identify and filter out non-additional projects in these new geographies (proposed under the revision) thereby preventing them from attaining registration under the VCS standard. Moreover, expanding to new geographies is a strategic decision taken by the top management at Verra with the aim to nurture clean energy transition globally and the justifications provided in these comments are not strong enough to warrant retraction of this decision in any form.</p> <p>Please refer to this Verra article for further justification (which was published along with the draft methodology during stakeholder consultation).</p> <p>Lastly, issues like double counting, Free, Prior, and Informed Consent (FPIC) and determination of project’s SDG impacts/co-benefits – as alluded to in these three comments - are standard level (and not methodology level) considerations</p>

Section 4 – Applicability Conditions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
			<p>under the VCS program and must be complied with by projects/activities, as applicable. Particularly, the <u>VCS Standard</u> mandates that the projects/activities:</p> <ul style="list-style-type: none"> • avoid any form of double counting/claiming and provides guidance for projects/activities to mitigate such instances (sections 3.23 and 3.24). • must obtain the agreement (consent) of affected communities in advance (prior), without coercion or manipulation (free), and based on full and accessible information (informed) and provides necessary guidance to achieve this (section 3.18). • must demonstrate measurable contributions to at least three SDGs by the end of the first and every subsequent monitoring period. Where possible, the project should also align with the host country’s SDG priorities (section 3.17).
		<p><u>Rd 2 comment:</u></p> <p>The original Verra’s response to the comment 9 is: <i>“The proposed revision and the VCS enhancement do not provide sufficient safeguards. The proposed expansion is not appropriate.”</i></p> <p>Also the original response to comment 15 is: <i>“Can consider points 3 and 4, points 1 and 2 are less impactful and covered in VCS standard to some extent.”</i></p> <p>Both show that there is still a need to include some additional requirements to provide full coverage and sufficient safeguards. Furthermore the requirements under section 3.17, do not address the comments raised</p>	<p><u>Rd 2 response:</u></p> <p><u>Comment No. 9:</u> Please note that Verra’s response to comment no. 9 in the comments log is only a summary of that comment for internal consideration/reference – it is not Verra’s opinion of the situation (which has been explained in the Rd 1 response above). Nevertheless, this comment was considered along with all other responses received against Question 2, and it was concluded that the majority of stakeholders are supportive of the proposed geographic expansion. Comment 9 was thus deemed immaterial and not worth further consideration/action.</p> <p>Verra decided to maintain its stated position as a result.</p>

Section 4 – Applicability Conditions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
		<p>especially considering that 3 SDGs will not necessarily include e.g. point 1 of comment 15.</p> <p>Finally including additional requirements for applicability related to co-benefits, will only increase the acceptance without creating a high barrier for new projects.</p>	<p><u>Comment No. 15:</u> Points 3 and 4 were considered internally and it was subsequently decided not to pursue them for this methodology revision due to the following reasons:</p> <ul style="list-style-type: none"> • <u>Point 3:</u> It was learned that these aspects are already part of the project review framework and need not be specifically mentioned in a methodology. Moreover, these aspects are applicable across many project types and placing them in a single methodology did not seem beneficial. • <u>Point 4:</u> Alignment with PACM or its implications is a primarily a standard level consideration and not a methodology level consideration. Alignment is being considered by way of standard revisions, and it is not clear what final shape it will take, Thus, it did not seem appropriate to at least for now and for the sake of consistency (between the standard and the methodology) to make any changes in the proposed methodology. This may be considered for a future revision, nonetheless. • <u>Point 1, Comment 15 and co-benefits:</u> As mentioned in our response in the comments log, we believe this point is less impactful and this deemed not worthy of consideration. We believe our SDG assessment requirements are sufficient and any further addition (as suggested) would be unnecessarily stringent on the projects. Moreover, SDG or co-benefits assessment is a standard level consideration and not a methodology level consideration. Thus, we believe no changes are required in the methodology.
		<p><u>Rd 3 comment:</u></p> <p>Considering that SDG or co-benefits assessment is a standard level consideration, the response can be considered acceptable</p>	<p><u>Rd 3 response:</u></p>

Section 4 – Applicability Conditions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
		and closed. Nevertheless, the reviewer’s opinion is as above <i>“including additional requirements for applicability related to co-benefits, will only increase the acceptance without creating a high barrier for new projects.”</i>	

Section 5 – Project Boundary

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update

Section 6 – Baseline Scenario

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update

Section 7 - Additionality			
#	Paragraph from Draft Methodology	Comment	Developer's Response and/or Update
5	5.2.3.3	In ACM002, this paragraph forms part of the baseline chapter. It is unclear why it has been included as a change to the additionality; it should be included as a change to Section 6 baseline.	<u>Rd 1 response:</u> Paragraph 5.2.3.3 has now been moved to Section 6 – Baseline scenario as suggested in the reviewer comment.
		<u>Rd 2 comment:</u> Accepted and closed.	<u>Rd 2 response:</u> Thank you for your response.
6	Last bullet point	This is a reporting requirement, not a methodological one. It is unclear why it is included in this revision, or what added value it provides given that the options are still available.	<u>Rd 1 response:</u> This requirement ensures transparency and consistency in how additionality is demonstrated and reported across projects and in line VT0008 that replaces CDM TOOL01. Recording compliance with sections 5.4.2(b) and (c) of VT0008 aligns projects with the latest standardized criteria, strengthens the credibility and auditability of additionality claims, and ensures all proponents follow a uniform, up-to-date methodological approach.
		<u>Rd 2 comment:</u> It is still not clear why a reporting requirement only applies to this methodology, when it should apply to all methodologies that uses VT008. This will increase the transparency in all VCS projects and not only for this methodology.	<u>Rd 2 response:</u> This reporting requirement is meant to transparently demonstrate whether a project has met the requirements in §8.5 a) 6.ii and 6.iii of the ICVCM Assessment Framework (section 4) which will then help evaluate (along with compliance with all other requirements) whether the project is eligible for CCP crediting or not. This reporting requirement will thus make the labeling process more transparent and convenient.
		<u>Rd 3 comment:</u> Accepted and closed. Nevertheless, the reviewer's opinion is that this transparency requirement should apply to the VT0008 and not only to some methodologies.	<u>Rd 3 response:</u>

Section 7 - Additionality			
#	Paragraph from Draft Methodology	Comment	Developer's Response and/or Update
7	ICVCM requirements	<p>Version 21 of the ACM002 (the differences between versions 21 and 22 do not affect the point below) has been assessed by the ICVCM and not approved. The following issue has been recognised as non-compliant:</p> <p>- §8.5 a) 6.ii and 6.iii of the ICVCM are obligatory requirements, whereas the VT008 only considers these requirements to be optional.</p>	<p><u>Rd 1 response:</u></p> <p>The referenced conditions have been kept optional for the sake of offering flexibility to the project developers using this tool. However, the project developers must comply with these conditions in this tool if they want to be eligible for receiving Core Carbon Principles labels (as indicated in the Note provided in this section of the tool).</p> <p>This is in line with the tenets of the ICVCM Assessment Framework.</p>
		<p><u>Rd 2 comment:</u></p> <p>The ICVCM does approve methodologies and not projects, hence in case that the methodology allows projects that do not comply with the ICVCM requirements, the methodology will not be approved.</p>	<p><u>Rd 2 response:</u></p> <p>That is correct. However, Verra does issue CCP labelled credits (which is what the above response meant) which will only be issued to projects that use CCP approved methodologies (and requirements therein, like those prescribed in VCS tools – VT0008 or VT0009). ICVCM does give conditional approval to methodologies (like <u>VM0050</u>) wherein only certain approaches/options are CCP approved and only those projects that use such approaches/options are eligible for earning CCP labelled credits. This is how projects complying with §8.5 a) 6.ii and 6.iii specifically can potential get CCP labelled credits (assuming they are compliant overall).</p>
		<p><u>Rd 3 comment:</u></p> <p>Considering that the intention of Verra is to obtain an ICVCM conditional approval, the response is accepted and the issue closed.</p>	<p><u>Rd 3 response:</u></p>
8	ICVCM Board observation	<p>The Board's observations clearly refer to developments under the PACM. One available standard is the 'Demonstration of additionality in mechanism methodologies', which has specific requirements such as '6.2 Analysis of look-in risk' and '6.5 Common practice</p>	<p><u>Rd 1 response:</u></p> <p>Please note that ICVCM Board observations are “<i>non-binding and do not impact or form any part of the Assessment Framework, Assessment Procedure, or any Decision (as defined under the Assessment Framework) and are</i></p>

Section 7 - Additionality

#	Paragraph from Draft Methodology	Comment	Developer's Response and/or Update
		analysis', both of which are related to the diffusion of technologies and are not included in the revisions. These issues have also been addressed in some comments: 4, 7, 13, 20 and 21.	<p><i>published by the Integrity Council for the purpose of information only.</i></p> <p>The lock-in risk and the common practice analysis are also part of the VCS standard documents and assessed accordingly, as described below.</p> <ol style="list-style-type: none"> 1) Lock-in risk is part of section 2.6 of the <u>VCS Methodology Requirements</u>. Renewable energy sources to generate electricity are globally recognized to have no lock-in risks and compatible with a transition to net zero. 2) Common practice is part of the VCS tool VT0008 Additionality Assessment, v1.0, which is used in the methodology to demonstrate additionality. <p>Additionally, the VCS Program and specifically the methodology requirements for additionality are approved by the ICVCM. Having said that, the VCS requirements and tools may be different from the PACM requirements due to different operational principles/philosophies.</p> <p>Lastly, the latest <u>VCS Methodology Template</u> contains a requirement to justify the proposed methodology's compatibility with transition to net zero (Appendix-X), which is in line with section 2.6 of the VCS Methodology Requirements.</p>
		<p><u>Rd 2 comment:</u> Accepted and closed.</p>	<p><u>Rd 2 response:</u> Thank you for your response.</p>

Section 8 – Quantification of Estimated GHG Emission Reductions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
9	8.2 49. And 53.	<p>The CDM Tool 05 uses a default value of 1.3 tCO₂/MWh, whereas the VT0010 uses an emission factor obtained via the VT0011, which does not consider the conservative value of 1.3.</p> <p>This revision reduces the conservativeness of the methodology. However, this does not comply with the VCS Methodology Requirements §3.9.2.</p>	<p><u>Rd 1 response:</u></p> <p>VT0011 does prescribe a conservative default value of 1.3 (paragraphs 25 and 50) and is applied in a way that is more conservative than CDM TOOL07. This is because, for calculating project emissions, it is 1.3, while for baseline emissions, a value of 0 must be considered.</p> <p>Please refer to section 6.2 (second monitoring table) of <u>VT0010</u> for further details – it refers to VT0011 where appropriate.</p>
		<p><u>Rd 2 comment:</u></p> <p>The CDM Tool 05 refers to the electricity consumption from the grid, while the VT0011 paragraph 25 refers to the import to the grid and paragraph 50 refers to options to calculate the OM emission factor while the CDM tool 05 refers directly as emission factor for the consumed electricity, which is more conservative.</p>	<p><u>Rd 2 response:</u></p> <p>The requirement to quantify EF using VT0011 CM is accurate and meets VCS program principles and methodology requirements.</p> <p>We agree that having a simplified default value that is conservative and may be useful in a future revision of VT0011 for use in other methodologies. This would give a low burden option for calculating emissions from electricity consumption.</p>
		<p><u>Rd 3 comment</u></p> <p>Considering the stated in the email dated 7.11.2025: “We have incorporated the finding’s input as an item for review within the VT0011 revision scope”, the reviewer opinion is that the noncompliance with this requirement can be solved through a FAR.</p> <p>This finding can be closed only after the FAR is implemented.</p> <p>FAR: considering that the usage of the conservative value of 1.3 will affect BESS and PSP cases, which are both limited in scope and relatively uncommon, the incorporation of this</p>	

Section 8 – Quantification of Estimated GHG Emission Reductions

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
		conservative approach in the VT0011 should be done with the next revision of the tool.	

Section 9 - Monitoring

#	Paragraph from Draft Methodology	Comment	Developer’s Response and/or Update
10	Missing statement	<p>A statement showing that the table below is an addition to, or change of, ACM0002 is missing.</p> <p><u>Rd 2 comment:</u> Accepted and closed.</p>	<p><u>Rd 1 response:</u> The corresponding statements have been added in both section 9.1 and 9.2.</p> <p><u>Rd 2 response:</u> Thank you for your response.</p>
11	Source of Data and value applied	<p>The EB decision (Annex 5 of EB23) clearly states 90 g CO_{2eq}/kWh. However, the value here is 100. According to the EB decision, this is inconsistent.</p> <p><u>Rd 2 comment:</u> With the correction of the source, the finding is closed.</p>	<p><u>Rd 1 response:</u> The <u>Hydropower Sustainability Standard</u>, as well as the <u>Hydropower Sustainability Guidelines on Good International Industry Practice</u>, state that a project with low emissions should have an emissions intensity less than 100 gCO_{2e}/kWh (please refer to this link as a reference for this assertion).</p> <p>The value of 100 g CO_{2eq}/kWh is chosen as it is more conservative compared to the EB23, Annex-5 value and is in line with the latest scientific understanding related to GHG emissions intensity of reservoirs.</p> <p>The source of data in this table is now corrected.</p> <p><u>Rd 2 response:</u> Thank you for your response.</p>

Appendix A

#	Paragraph from Draft Methodology	Comment	Developer's Response and/or Update