

# SUMMARY OF PUBLIC CONSULTATION

## Methodology for IMPROVED EFFICIENCY OF FLEET VEHICLES AND COMBUSTION ENGINES v3.0

A draft of *Methodology for IMPROVED EFFICIENCY OF FLEET VEHICLES AND COMBUSTION ENGINES v3.0*, was open for public consultation between October 14, 2021 and November 13, 2021. This document includes a list of each comment received and the developer's response.

## GENERAL FEEDBACK

### Section 8.1.1 - Baseline emissions utilizing telematics systems

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#	Organization	Comment	Developer's Response
1	Derive Systems	<p><b>Allow baseline emissions utilizing telematics systems to be calculated with emissions factors for comparable vehicles.</b></p> <p>We are pleased to see that the methodology has included the option to utilize telematics systems to calculate baseline and project emissions. However, we recommend that the methodology use calculated emissions factors instead of quantifying baseline emissions on a per vehicle basis. Currently, the methodology requires that "For all vehicle types equipped with a telematics system capable of tracking fuel consumption, the baseline emissions shall be calculated using</p>	<p>The first comment is not applicable to the Methodology under review which aims to provide fleets with reductions in Carbon Emissions. The most truthful way to prove that the emission reductions are true and accurate is to compare the vehicle against itself because all engines/vehicles perform differently regardless of being the same make and model. The commentator suggests that this comparison can lead to a perverse incentive to not maintain vehicles but this is not the case as the Methodology under review measures reductions in Carbon Emissions regardless of the maintenance performed on any particular vehicle.</p> <p>Secondly, if the entity does not do maintenance and applies technology that is applicable under this Methodology under review, the outcome would be the same as the</p>

### Section 8.1.1 - Baseline emissions utilizing telematics systems

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		<p>the vehicles own data prior to the project measure's implementation" (Section 8.1.1). We find the requirement to calculate baseline emissions based on each individual vehicle's operation problematic as this presents an array of installation and deployment issues along with undesirable and unnecessary GHG emissions, specifically for new vehicles.</p> <p>The vast majority of Derive's VQ Efficiency products, which improve the efficiency of vehicles through mechanisms that are eligible with this methodology, are installed on new vehicles at a central location before delivery to the end user. These project activity measures are typically installed at the upfitting site and then distributed to various regions throughout the country for regular usage and operation. The need for each individual vehicle in a project fleet to operate for at least 5,000 km before implementing the project activity will pose onerous challenges as the installation site is often far away from where the vehicle operates for regular usage. Moreover, this requirement presents a perverse incentive to maintain inefficient vehicles, despite being of the same category with similar usage and emissions factors.</p> <p>For example, under the current draft methodology, if 500 new and similar vehicles</p>	<p>maintenance would still not be done. The lack of maintenance would be considered the entity's "business as usual". If the maintenance was done during the project activity, it would not be credited as that is a change of operational procedure, which is not applicable in the methodology as stated in section 4, point 5. The installation issue for the project activities is on the manufacturer; the technology the methodology developer is using for the Methodology under review does not suffer this issue.</p> <p>The second comment is not applicable to the Methodology under review which aims to provide fleets with reductions in Carbon Emissions. 5000km used as a baseline of a trial period is acceptable statistically as an appropriate sample size for operations. The Methodology under review has been updated to include a comparable duration in hours.</p> <p>The third comment is not applicable to the Methodology under review which aims to provide fleets with reductions in Carbon Emissions. Using comparable vehicles versus the individual vehicle does not necessarily give an accurate measurement of the emissions reduced by that vehicle or the project as a whole. Project developers that aim to avoid having to do baselines along with control vehicles and instead use data from a similar project run the risks that such statistics may not provide accurate reductions in Carbon Emissions. As well, the emissions during the baseline trial are necessary because in order to get a proper baseline without the improvement measures. Improvements of reductions in Carbon Emissions are necessary in the VCS program.</p>

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		<p>are manufactured and upfitted in Florida with operations in Colorado, the project proponent would have to move the new vehicles (without the project activity) from Florida to Colorado, operate the high GHG emitting vehicles for at least 5,000 km each (2,500,000 km total), and then either send the vehicles back to Florida for project activity installation or find an alternative installation method, which is difficult and limited. If unaddressed, these deployment challenges could ultimately result in limited installation of efficient technologies, increased GHG emissions, and reduced participation in the VCS program.</p> <p>For vehicles with similar usage and fuel economy, calculating baseline emissions on a per vehicle basis is unnecessary as the emissions factors for comparable vehicles should be equivalent throughout the fleet with minimal standard deviation. Alternatively, if the methodology is updated to allow for the use of calculated emissions factors, the project proponent could utilize data from existing comparable vehicles to determine appropriate baseline emissions factors and eliminate the need to operate similar vehicles without the project activity. This change would also allow the project proponent to complete most project activity installations at the upfitting site and avoid undesirable and unnecessary operational GHG emissions.</p>	<p>The forth comment is not applicable to the Methodology under review which aims to provide fleets with reductions in Carbon Emissions. the commentator is suggesting using data from comparable vehicles to establish a "fleet-specific regional emissions factor for each vehicle category" which would be fine if there was a governing body that could establish what each "fleet-specific emissions factor" is and determine which "categories" apply to the project proponent and activity. Since each company or fleet operates differently, with different vehicle activities, with different vehicle types and age, under different conditions which would make for specific categories to that entity, creating entity specific categories would lead to infinite categories and "fleet-specific regional emission factors". The Methodology under review compares Carbon Emissions of vehicles back to its own particular baseline derived from its own data to reflect the true savings of Carbon Emissions.</p> <p>The comment from the commentator that also suggests to use 10% of the sample vehicles prior or during the first credit period. Why use 10% of the sample vehicles when the Methodology under review uses 100% of the data that is available. As a result this suggestion of using only 10% of vehicles is not applicable to the Methodology under review which aims to measure entire fleets with actual and more certain and measured reductions in Carbon Emissions.</p>

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		<p>To remove this perverse incentive and increase usability of the methodology, we propose that the VCS remove the need to calculate baseline emissions on a per vehicle basis for new vehicles with telematics systems and instead utilize a sample of comparable vehicles to develop a fleet-specific regional emissions factor for each vehicle category. We recommend that baseline emissions factors be calculated based on the activity level and fuel usage of at least 10% of sample vehicles during or prior to the first crediting period, within a specific vehicle category with comparable fuel economy and usage. The baseline emissions for these sample vehicles may be derived from the methodology's stated threshold of at least 5,000 km of operation; however, we also suggest additional clarification regarding the development of this requirement and how it would be generally applicable to different fleets.</p>	

## Section 8.1.2 - Baseline emissions not utilizing telematics systems (control group method)

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1	Derive Systems	<p><b>Provide additional details for baseline emission calculations for vehicles using a control group.</b></p> <p>The methodology states, “Control group vehicles shall be selected from the vehicle fleets of the project proponent or from third party fleets (preferred option)” (Section 8.1.2). Currently, we believe that the definition of a “third-party fleet” is unclear, and we are unsure if a third-party control group could be used for more than one project. To increase clarity, we recommend that the methodology developer expand on the definition and parameters for the control group.</p> <p>Additionally, we recommend that the methodology provide clarity on baseline emissions equations for vehicle categories not using the telematics systems by making the following changes:</p> <ul style="list-style-type: none"> <li>• Move equation 6 to section 8.1.2</li> <li>• Add description of parameter <math>ALtkm,i,x,y</math> in equation 4</li> <li>• Provide parameter descriptions for equation 7</li> </ul>	<p>Control groups are specific to the comparable group. If a control group can be used for multiple comparisons, wouldn't that mean they are the same and therefore be in the same project?</p> <p>The equations in section 8.1.1 and 8.1.2 are for all vehicles if there is no specific set of equations for that particular vehicle or fleet. Equation 6 uses a different larger unit of measurement which is more practical to use for trucks and buses which is why it is in 8.1.3.</p> <p>A description for <math>ALtkm,i,x,y</math> has been added. A description for the equation has been added.</p>

Section 8.2.2 - Project emissions not utilizing telematics systems / 8.2.3 - Project emissions for all other vehicle categories

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1	Derive Systems	<p><b>Clarify missing and/or confusing information in quantification/monitoring sections.</b></p> <p>We believe the VCS should review and expand on the calculations for project emissions not utilizing telematics systems and project emissions for all other vehicle categories (Section 8.2.2 and 8.2.3) to ensure completeness and accuracy when quantifying emissions. We request that the methodology developer include descriptions for all parameters, specifically in equations 14, 15, and 16.</p> <p>Additionally, we suggest clarification for why different equations and parameters have the same description. For example, the calculation for baseline emissions utilizing telematics systems (equations 1, 2, and 3) appear to be identical to the calculations for baseline emissions for mobile machinery (equations 8, 9, and 10). An explanation of the difference between these two calculations would be useful. We also suggest that when describing parameters for calculating emissions from telematics systems, the methodology developer refrain from using the term "control group" to mitigate confusion with specified control</p>	<p>The equations in section 8.1.1 and 8.1.2 are for all vehicles if there is no specific set of equations for that particular vehicle or fleet. Equation 6 uses a larger unit of measurement which is more practical to use to trucks and buses which is why it is in 8.1.3. The tables have been added and updated. Options are options; pick the one that is best suited for the application.</p>

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		<p>group calculations (e.g., equations 2 and 3).</p> <p>Furthermore, in Section 9.2 Data and Parameters Monitored, we recommend that the tables be reviewed and completed for each parameter. For example, in the third table (ALi,x,y) there are multiple descriptions of measurement methods and procedures to be applied for both option 1 and option 2. We request clarification on which description is accurate.</p> <p>Thank you again for the opportunity to weigh in on the draft Methodology for Improved Efficiency of Fleet Vehicles and Combustion Engines (v3.0). We support this endeavor and believe this methodology, if revised, has the potential to bring to market high-quality carbon offsets.</p>	