

Proposed Amendment to ACR Truck Stop Electrification Methodology

IdleAir would like to propose to an amendment to the already approved methodology on truck stop electrification. The proposed amendment has to do with Section 4.2.2 of the methodology, which requires surveying TSE clients to determine the age of their trucks. The text of the relevant section is below and requires the Project Proponent to interview a minimum of 51% of TSE customers when they register in the system. This survey is used to discount baseline emissions if the average age of trucks as determined by the survey is less than five years. The assumption is that younger trucks are more efficient and will consume less diesel when idling in the baseline scenario.

IdleAir proposes that a survey of 51% of customers is statistically not necessary and a much lower level could be surveyed to achieve the same objective. This is particularly true if, as IdleAir hopes, the number of customers could be in the tens of thousands in the near future. Typically, methodologies allow standard statistical sampling, where a much smaller sample can capture the same level of accuracy. In fact, Section 4.6.2 of the methodology does allow for an uncertainty deduction for mean estimated net emission reductions. IdleAir would propose using standard statistical sampling, requiring that the result be within $\pm 10\%$ at a 90% confidence interval. The survey size would thus not be fixed. If there are a very high number of TSE customers in a project, then the sample size would be comparatively small. If the number of TSE customers is small or if there is a wide range in the survey results, then the sample size will be comparatively large. TSE customers would have to be surveyed until the required level of precision is reached. If this level of precision cannot be reached – or if the Project Proponent opts not to survey enough TSE customers to reach the required level of precision – then the uncertainty (i.e. margin of error) must be added to the overall uncertainty deduction as outlined in Section 4.6.2.

Listed below are the relevant sections and the proposed changes:

4.2.2 Survey of TSE Clients

For conservative crediting, it is important to ensure that the baseline emission rates (gCO₂/hour) from diesel engine idling are not overestimated. This version of the methodology uses recent (EMFAC 2011) baseline emissions rates, which show a slight improvement in diesel engine efficiency compared to the 2002 EPA study. Besides tracking efficiency improvements over time, collecting data on the actual TSE system users can help determine whether their trucks are systematically more or less efficient than the average trucks on which the gCO₂/hour baseline emission rates are based.

The Project Proponent shall collect truck model year information for a representative sample ~~least 51%~~ of TSE customers when they register in the Project Proponent's member database. The

survey will require +/- 10% precision at a 90% confidence interval. If the sample size does not reach this level of precision, then the actual uncertainty (i.e. margin of error) will be deducted from the baseline emissions. Thus, if the margin of error is $\pm 3\%$ based on the survey, then BE is deducted by 3%.

Using this data the Project Proponent shall conduct an annual assessment whether the average age of TSE customers' trucks is less than five (5) years. If the average age is less than 5 years, the baseline emission rates above will be discounted by 5% (in addition to any margin-of-error deduction) based on the conservative assumption that these trucks may be more efficient (lower-emitting) than the average trucks on which the EMFAC emission rates are based. In this case the high-idle rate of 11,349 gCO₂/hour will be replaced with 10,782 gCO₂/hour, and the low-idle rate of 4,934 gCO₂/hour will be replaced with 4,687 gCO₂/hour. If the survey indicates the average age of TSE customers' trucks is 5 years or greater, the EMFAC rates of 11,349 gCO₂/hour high-idle and 4,934 gCO₂/hour low-idle will be used for all trucks

Section 4.6 – after the bullet *Environmental influences and operating errors*, the following bullet will be added:

- Survey of Truck Owners: Project Proponents will survey TSE customers to determine the age of their trucks. There is some inherent uncertainty in any statistical sample, and this survey will require a 10% precision and a 90% confidence factor. If the sample size does not reach this level of prevision, then the actual uncertainty, specifically the margin of error will be deducted from the calculation of baseline emissions.