

First of all, thank you for the opportunity to comment on the Draft Landfill Project Protocol. Zeroemissions Technologies, a company integrated into Abeinsa, which is Abengoa's industrial engineering and construction business unit, provides global solutions to climate change by developing emission reduction projects. In addition, Zeroemissions is intensely involved in the R&D program development for greenhouse gases reduction and elimination. Abengoa, through its subsidiary Zeroemissions is active in the voluntary carbon market since already has established its own carbon reduction targets. Zeroemissions is then an active project developer aiming to reduce Abengoa's offsets as part of our carbon management strategy.

The comments below are based on the experience and have the

1. Comment on Section 3.3 Additionality (page 6).

The Performance Standard Test and Regulatory Test which would need to be passed in a yearly basis in order to guarantee the continuous additionality of the project will be a key risk for project developers to proceed with upfront investments since the revenues will not be secured for enough time. I would recommend to establish a relationship between the frequency of these tests with the amount of reductions verified in each accounting cycle. In this way, in case the amount of emissions verified is below a pre-set threshold of Carbon Reduction Tons (CRT) in the first year, the verifier will recommend the additionality test in an specific schedule for the subsequent accounting cycle. In this way, project developers can ensure that the investment will be paid back by a certain level of emissions pre-set by the CCAR procedures. Moreover, small projects will be benefit from this measure (similar to Small Scale projects in CDM). The table below can be used as example:

<i>Carbon Reduction Tons (CRT/year)</i>	<i>Additionality Test Frequency</i>
<15000	10 years (only once at the beginning of the crediting period)
15000 to 30000	5 years (one at the beginning and another the 5th year of the crediting period)
50000-100000	2 years (every two years since the end of the first accounting cycle)

2. Comment on Section 6 Project Monitoring (page 23 and 24).

The data unit used to measure the LFG (main and for each device) is in ft³, which means that cumulative readings would need to be taken. Since in page 24, also T and P would need to be taken to normalize (adjust) the flow, technically is not possible to normalize the cumulative flow since this would imply that only the last T and P reading will be used. I would recommend to change the data unit of the LFG (main and for each device) by the flow unit (ft³/h) since this will be of more use to the landfill operator on site to optimize the LFG extraction and also, numerically, will make more sense to apply a T and P correction to a flow rather than a cumulative figure.

3. Comment on Section 6 Project Monitoring (page 24).

The comment against the parameter 'methane fraction in the landfill gas' states that the methane needs to be measured in a wet basis. Since most of the gas analyzers on the market use electric devices for the measure, it is vastly common to use filters to extract the humidity of the gas in order to ensure the precise measure. For this reason, I would recommend to prescribe the measure of the methane concentration in a dry basis. In order to consistently apply the concentration of the methane to the LFG flow, both would need to be monitored in the same basis. It is then possible to convert the LFG flow reading from wet to dry basis by applying Equations of State which correlate the humidity (water content) with the gas pressure. Antoine Equation of State is based on very well studied constants (Antoine Constants) and estimate the humidity content from pressure reading.

4. Comment on Section 6 Project Monitoring (page 24).

Temperature and Pressure would need to be measured to normalize the flow. In the comments against those parameters, it states that if flow meters that automatically measures T and P (Volumetric Flow meters) are used, this measure is not necessary. However, there are other kind of flow meters (like Thermo Mass flow meters) which do not measure T nor P, which provide normalized flow readings since it measures temperature and provides mass flows applying the King's Law (mass passing through a device is proportional to the necessary current to keep a differential temperature constant). I would then recommend to extend the type of flow meter choices considering the state-of-the-art available technologies.

5. Comment on Section 6 Project Monitoring (page 24).

The parameter Operation of the landfill gas collection system is vaguely described since the passive collection system (wells, pipework, manifold,...) will always be operating. Since normally one main blower is used in the industry, I would recommend that the operation of each device is monitored (but not the main) by ensuring that the minimum operational parameters pre-set by the manufacturer are met to consider that the device is running.

I hope the above comments help to improve the quality and applicability of the Draft Landfill Project Protocol. If you have any comments or questions, please do not hesitate to contact me.

Kind regards

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