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Do you want to submission to be kept confidential? YES	

ANSWERS TO REVIEW QUESTIONS

Would landfill gas capture and combustion activities undertaken under the Emissions Reduction Fund 'Landfill Gas Method' continue after the end of the seven year crediting period if they were not eligible to receive Australian Carbon Credit Units?

Yes, landfill gas capture and combustion will continue after the end of the seven year crediting period. As for most putrescible landfills - some landfill gas capture is required to create a safe working environment and to avoid the release of unacceptable odour at the boundary of the landfill site.

Do state and territory landfill gas regulations require landfill gas capture and combustion activities undertaken under the Emissions Reduction Fund Landfill Gas method to continue, even if projects are no longer eligible to receive Australian Carbon Credit Units?

Landfill gas regulations vary from location to location but generally require putrescible landfill operators to capture and combust landfill gas, to ensure a safe working environment and reduce off-site odour.

However, the availability of ERF credits has created an incentive for landfill operators to capture volumes of gas above and beyond regulatory compliance (referred to here as 'additional gas'.)

Have installation and maintenance costs of landfill gas capture and combustion projects changed over time? If so, by how much?

Landfill gas installation and maintenance costs have increased in line with inflation over recent years. Landfill gas capture and combustion costs have, where ERF credits have been targeted, increased significantly to maximise the capture of 'additional' gas.

These costs relate to;

1. Increased well density,
2. Installation of sacrificial horizontal collectors, and
3. More regular monitoring for data management and reporting.

Without ERF revenue it is likely that existing gas fields will not be maintained at the current density and current 'additional gas' volume will be lost over time. In summary ERF credits have considerably improved the performance of landfill gas systems.

Has the technology for landfill gas capture improved since the Landfill Gas method was made, making landfill gas capture activities more cost effective?

No; the basic collection and combustion technology is unchanged. That is; post capping drilled vertical wells linked to a flare.

What has changed is the spacing of wells and the introduction of sacrificial horizontal wells prior to capping, along with the monitoring of individual wells to maximise extraction and methane concentration.

Also the complexity of flair installations has improved to better capture data and ensure higher combustion efficiency.

What other sources of revenue are available to landfill gas projects? Has the revenue from landfill gas capture and combustion projects improved such that the activity is more cost effective?

In addition to ERF income, some landfills provide gas for power or heat generation, however these sites require additional equipment such as generators or special burners for brick manufacture. This means significant additional investment. This income is generally limited to larger sites. For smaller sites, ERF revenue is essential to make landfill gas flaring economically viable.

Have reputational benefits or other positive outcomes from landfill gas projects changed such that proponents would continue projects in the absence of funding under the Landfill Gas method?

No; there are minimum operating standards that must be met by landfills and they are strictly enforced in most jurisdictions. Landfills have, in response to various incentives of the past 25 years, embraced greenhouse gas reduction and reduced their overall emissions. This response continues today with support for organic diversion from landfills.

Given your knowledge and experience of projects operating under the Emissions Reduction Fund, would you invest in a new landfill gas project in the absence of the Emissions Reduction Fund?

Landfill gas collection and capture is an essential element of landfill management and as a result should be included in any new project. However in the absence of the ERF or other greenhouse reduction programs, no effort would be made to target 'additional gas' or maximise landfill gas captured (beyond odour reduction and regulatory requirements).

What lessons did you learn from the establishment and ongoing operation of your existing landfill gas project(s) that would impact your decision to invest in new projects?

The collection and combustion of 'additional' landfill gas has been expanded due to funding from the ERF. Without ERF funding, landfill gas capture will continue at existing sites but volumes will decline and field maintenance will not be kept for non-essential wells.

Further, when collection and flaring have been established by external contractors, the loss of ERF revenue may result in removal of infrastructure.

In respect to new landfills (and sites currently without gas capture), investments will be limited to achieving only regulatory compliance.