

Discussion Paper: Possible Design for a National Greenhouse Gas Emissions Trading Scheme

Information Sheet No. 10

Monitoring, reporting and verification

What systems would be required?

An effective, credible and efficient emissions monitoring, reporting and verification system would be required to underpin any National Emissions Trading Scheme.

The system would make monitoring mandatory and require reporting (but not necessarily disclosure) at facility level, with stringent verification and auditing protocols.

Ideally, emissions monitoring and reporting would be based on streamlined national processes that are currently under development.

Additional requirements for data quality, accuracy and auditing would be needed to underpin an emissions trading scheme.

How are greenhouse gas emissions measured?

Greenhouse gas emissions are rarely “measured” in a traditional sense. Almost all quantification of emissions is done via calculations. These calculations use physical data and emissions factors to estimate the tonnes of greenhouse gases emitted, or not emitted.

For example, the annual emissions from a coal-fired power station are calculated by combining:

- the amount of coal fed into the boilers during that year
- the average energy content per tonne of coal burned
- the emissions factor for that type of coal, (ie, tonnes of greenhouse gases per unit of energy in the coal)

Some of these key inputs are very difficult to measure and there is often a high level of uncertainty in the results of the emissions calculations.

What is MRV?

MRV stands for Monitoring, Reporting & Verification. This refers to the integrated systems that are required to ensure that emissions calculations are accurate enough to be used in an emissions trading scheme.

MRV systems involve monitoring of all the inputs to the calculations, reporting of the results, and verification of it all by an auditor.

When should NETS MRV systems commence?

Experience with the European Union’s Emissions Trading Scheme suggests that it is critical to have the underpinning emissions monitoring and reporting systems in place and working well before a trading scheme commences.

This provides crucial information for cap setting and permit allocation.

The Discussion Paper proposes that the NETS could commence as early as 1 January 2010. This means that the required MRV systems would need to be in place no later than the start of 2008.