NZ ETS Reporting Requirements

Clinker and Burnt Lime Production

Ministry for the Environment
Manatū Mō Te Taiao

Agenda

Optional

ETS Reporting 101 (over lunch)

- Government agencies involved
- Functions of the Registry
- Participant Registration
- Key Dates
- Tax Treatment
- Data Retention & Compliance

Session One

- Prescribed documents & emissions returns
- Overview of draft regulations
- Worked example
- Discussion

Prescribed Documents

- Climate Change Response Act 2002
- Climate Change (…) Regulations 2009
- Participant Registration Forms
- Emissions Return Forms
- Standards (incorporated by reference)

Non prescribed documents

- ETS Bulletin 10
- Workshop documents: emissions calculation forms
- Draft guidance materials (Beca)
- Consultant's report - Aurecon

Emissions Returns Format

Interim

- Based on calculation formulae as set out in regulations
- Reporting templates by activity – Excel based
- Signature

Long term

- On line Registry reporting tool

Draft Regulations: Overview

- Aurecon report – input to the revised regulations
- The draft regulations take a simplified approach
- Note the ‘pure chemical’ emission factors
- Emission equation is now structurally very simple
- Standard reporting form (see electronic version later)

Draft regulations: overview contd.

- Sufficiency of data (from Reg. 33) to report emissions (Reg. 34) and leave an auditable trail
- The model is effectively UEF-like in that you report your emissions & hence no need for UEFs

Emissions Equation

$$E = (A \times EF_1 \times B) + \sum(C \times EF_2)$$

$(A \times EF_1 \times B) = CO_2$ emissions from clinker production – including the cement kiln dust correction factor

$\sum(C \times EF_2) = CO_2$ emissions from the tonnes of each class of burnt lime produced

Example 1: clinker

From 3.3 of the Beca report: see draft forms & calculator

Production 20,000 t of clinker

CaO content 65% by weight

MgO content 3% by weight

Cement kiln dust recycled

E = (13,000 × 0.79 × 1.02) + (600 × 0.91)

= 11,021 tCO_2e

[different MgO assumptions yield the above or 10,475 or 10,749 – see questions for discussion]

Example 1: clinker

Go to the on-line calculator

Example 2: burnt lime

79,200 tonnes of burnt lime produced per annum

Product was 99% pure CaO, the balance iron/silica

E = (0 × 0.79 × 1.02) + (79,200 × 0.79)

= 62,568 tCO_2e

The above works for limestone or dolomite, if tried to include an $MgCO_3$ impurity, then we are in a similar situation to example 1

Example 2: burnt lime

See the example of on-line calculator use

Verification

- Currently no third party verification is required for routine emissions reporting, unlike UEF regulations
- Best practice is to commission independent verification for internal purposes and to manage subsequent audit risk
- How much specification is required in regulations to facilitate verification, e.g. standard xyz or recognised equivalent?

Questions for Discussion

- Emission equation suitability for both plants – cement kiln dust correction?
- Is 1.02 accurate for plant B and irrelevant i.e. 1.00 for plant A?
- Is the required data for ETS reporting sufficient for the emissions equation (to both report emissions and be auditable)?

Questions for Discussion contd.

- $MgCO_3$ – only an impurity associated with limestone?
- Example 1 problem, options: leave it out, include it as Beca did (possible double counting), or consider a model where work backwards from observed CaO & MgO regardless of source

So what's next?

- Submissions on draft regulations – due 13 July
- Further engagement & consultant input
- Questions?

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