NZETS Reporting requirements

Coal – Session One

Ministry for the Environment
Manatū Mō Te Taiao

Agenda

Session One

- Prescribed documents
- Emissions returns format
- Overview of draft SEIP regulations
- Examples

Session Two

- Overview of draft UEF regulations
- Standards
- Verification
- So, what's next?

Prescribed documents

- Climate Change Response Act 2002
- Climate Change (Stationary Energy and Industrial Processes) Regulations 2009
- Climate Change (Unique Emissions Factors) 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- Draft guidance materials (BECA)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

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 SEIP regulations: overview

- Separate formulae for importing, mining and purchasing coal
- Default emissions factors based on energy content
- Participants required to collect data on tonnes and calorific value of coal
- Stockpile adjustment: optional

Emissions factors

- Emissions factors for importing coal based on mining (domestic) coal emissions factors
- Based on information from CRL Energy survey of coal properties
- ‘Adverse selection’ from UEFs
- DEFs set slightly above mean
- UEF eligibility thresholds
- Fiscal neutrality and fairness

Importing coal

E = ((A × CV) – (B × CV) – (C × CV)) × EF

(Imports – Stockpile Adjustment – Exports)

× EF

- Refer to coal calculation form

Importing coal – stockpile adjustment

- Voluntary mechanism
- Defer payment for emissions from stockpiled coal
- Calculation detailed in Schedule 1
- If stockpile adjustment is > 0 stockpile growing
- One class: (tonnes added – tonnes used) × CV
- Joint stockpile: formulae for notional tonnes of class and CV used

Mining coal

$TE = \Sigma(E) + \Sigma(H \times EF_2) – (I \times EF_3)$

Mined Coal Emissions + Fugitive Emissions – Avoided Emissions from Flaring

- Refer to coal calculation form

Mining coal – mined coal

$$E = ((A \times CV) + (F \times CV) + (G \times CV) - (C \times CV) - (D \times CV)) \times EF$$

(Mined + Own Use + Gifted – Exports – Opt-in) × EF

- Mined coal measured at point of sale
- Own use and gifted coal are additional to coal passing through the point of sale

Mining coal – fugitive emissions

$\Sigma(H \times EF_2)$

Sum of (Tonnes Mined in Category × EF)

- Reporting required under Act
- Categories and emissions factors based on IPCC

$I \times EF_3$

Tonnes of Methane Flared or Combusted x EF

- Deduction for avoided emissions from flaring methane or combusting methane for energy

Purchasing coal (opt-in)

$$E = ((A \times CV) - (B \times CV) - (C \times CV)) \times EF$$

(Purchased – Stockpile Adjustment – Exports) × EF

- Opt-in (>250,000 tonnes)
- Purchased from miners only
- Stockpile adjustment voluntary – Schedule 1
- Refer to coal calculation form

Worked example

- Developing calculators
- Refer to handout examples

Questions

- Are there any difficulties in obtaining data on tonnes of coal and calorific value?
- How many participants will use the stockpile adjustment mechanism?
- Is applicable class of coal clear? [Schedule 2]
- Any difficulties reconciling miner and opt-in purchaser's obligations?

NZETS Reporting requirements

Coal – Session Two

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Agenda

Session Two

- Overview of draft UEF regulations
- Standards
- Verification
- So, what's next?

Draft UEF regulations: overview

- Voluntary mechanism to use UEF if emissions from specific coal source materially lower than under DEF
- UEF ‘class’
- Thresholds for obtaining UEF
- Sampling, testing, calculation
- Verification
- Use, ongoing testing and expiry

UEF ‘class’

- Approved UEF applies to defined ‘class’
- Class no larger than coal from a designated mine
- Class may be smaller – coal must be easily identified and accounted for
- No UEFs for fugitive emissions
  - Measurement uncertainty/difficulties
  - Requires sampling standardisation, assessment of desorption rates

UEF thresholds

- Thresholds specific to each class of coal in Schedule
- ‘Adverse selection’
- Protect fiscal neutrality – deliver DEF/UEF model fiscally equivalent to DEFs only
- Carefully set DEF/UEF model allows DEFs close to mean and eligible UEFs are materially different from DEFs

Sampling

- Three samples taken at intervals of not less than a month (unless impracticable)
- Advised multiple samples would provide necessary precision to ensure UEFs are materially less than DEFs
- Avoids explicitly requiring uncertainty estimates
- ISO 18283:2006 (hard coal and coke)

Testing

- ISO 17025:2005 accredited tester
- AS 1038.6.4-2005 or ISO 12902:2001 (carbon content)
- ISO 5068-1:2007 of ASTM D3302 (total moisture content)
- ISO 1171:1997 or ASTM D3174-04 (ash content)
- ISO 1928:1995 (gross calorific value)

Calculation

EFC = C × 3.67/CV

Carbon Content × 3.67/Calorific Value

UEF = (EFC × 0.98) + 0.000015 + 0.000465

CO_2 EF × Oxidation Factor + CH_4 EF + N_2O EF

- Oxidation factor - not all carbon oxidised

Verification

Matters to be verified include:

- Sampling standard compliance
- Accreditation of tester
- Testing standard compliance
- Calculation of UEF

Use, ongoing testing and expiry

- May use UEF for year data collected if apply by 31 January
- Application accompanied by plan for ongoing testing – ensure UEF still accurate for class
- UEF expires when:
  - material change in information
  - conditions not met

Questions

- Are restrictions on class for UEFs appropriate?
- Familiarity and use of sampling and testing standards?
- Thoughts on costs of sampling and testing?
- Thoughts on conditions for UEF approvals?

So what's next?

- Submissions on draft regulations close 13 July
- Further engagement

- Questions?

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