



Recycled Organics Unit

CPRS and voluntary carbon
markets: abatement and soil
sequestration options for organics
processing

Angus Campbell

www.recycledorganics.com

Overview of cap and trade



- Quantification of national emissions provides baseline
- Govt sets an annual cap on total emissions, consistent with reduction targets
- Govt issues and AUCTIONS number of PERMITS equal to defined annual cap on emissions for the year
- Enterprises covered by the scheme need to surrender a PERMIT for every tonne of CO₂-e produced that year
- Quantity of emissions produced are monitored and audited
- Enterprises can acquire permits and/or reduce emissions
- Enterprises therefore have a clear price incentive to invest in reducing emissions in the most efficient manner

Who's in: Mandatory CPRS cap and trade

- The *National and Energy Reporting Act* (Sept 2007) established via COAG under the Howard Government mandated corporate reporting system for GHG emissions, energy consumption and production for:
 - Facilities emitting > 25 Kt CO₂-e per year; or producing or consuming > 100 terajoules of energy
 - Corporate groups emitting > 50 Kt CO₂-e per year; or producing or consuming > 200 terajoules of energy
- Green Paper preferred position maintains this 25Kt threshold for compulsory inclusion, liable firms are already participating in NGERS
- Directly includes ~ 700 such major emitters in the CPRS to cover ~ 75% of Australia's emissions in the sectors covered
- Australia's 2006 net greenhouse emissions 576 million tonnes of CO₂-equivalent (Mt CO₂-e)

What about my company?



- In sectors characterised by many small emitters, cost of compliance with scheme obligations is inefficient
- Only want the really large emitters included
- Emissions from smaller companies can be largely captured in another point in the supply chain
- Smaller emitters are not included, but emissions are addressed indirectly via mandatory inclusion in CPRS of fuel and energy producers
- This results in a price signal for smaller enterprises to reduce consumption and resulting emissions

Waste sector emissions



- Sectoral breakdown shows the Waste sector contributing 2.9% to Australia's greenhouse inventory via:
 - Methane emissions from solid waste to landfill (>85%)
 - Domestic, commercial & industrial wastewater (13%)
 - Solvent & clinical waste incineration (<1%)

Waste sector emissions



- Garnaut review recommended:
 - Waste emissions remain outside the scheme until accuracy of emissions estimation improves
 - Outcome can be achieved by prescriptive mandatory regulation
- Green Paper position
 - >450 active solid waste and >300 wastewater facilities
 - Fewer than 100 landfill sites receive ~ 80% of waste disposal
 - Coverage possible using indirect estimation methods (emissions/tonne of waste deposited)
 - Immediate coverage avoids *perverse incentive* for delay
 - Estimate that 26% of methane currently flared or generates renewable electricity
 - 25kt CO_{2-e} /yr threshold would cover ~80% of landfill emissions from <100 participating landfill facilities

So what about landfill?



- Interpretation and discussion with AGO
 - Garnaut suggested regulation without incentive
 - Green Paper position offers landfill operators access to adjustment funds for methane capture and more
 - Gate fees will increase in major and metro Landfills
- Barton Group, WSN, SITA, THIESS, TPI submissions:
 - Exclusion of emissions from waste disposed to landfill pre-scheme; thresholds and competition; long term contracts
 - Methane capture + organics diversion
 - Exclude landfill until direct measurement methods proven / include with standard coefficients and IPCC method as interim.
- Legacy emissions have subsequently been excluded
- Direct measurement methods appear to be accepted

So what about organics processing?



- Green Paper
 - **In the waste sector, ONLY landfill deposits and emissions are covered (or directly included) in the CPRS**
 - If it doesn't go into landfill not directly covered
 - If you don't operate a landfill there is no suggestion in any government documentation that compost facilities are included
 - It doesn't matter if your compost facility is located on a landfill site – you are not responsible for the activities of your landlord.
- The majority of your emissions arise from consumption of transport fuels and electricity, and energy intensive materials that use these inputs (eg. steel, concrete, fertilisers).
- Fuel and energy producers are covered, and these inputs will be subject to increased prices over time
- Compost operations, like other small emitters are covered indirectly via mandatory inclusion in CPRS of fuel and energy producers, which will result in a price signal that discourages inefficient use of energy or fuel.

What is happening with offsets?



■ Green Paper

- *Offset credits are rewards for reductions in emissions measured against an assumed baseline*
- *Offset schemes are administratively complex and require considerable subjective judgement*
- *Offset schemes do not increase national abatement [in CPRS], as the provision of credits into [a cap and trade] system allows additional emissions in the covered sector*
- *CPRS provides incentive for participants, offsets should be considered only in sectors not covered [by CPRS]*
- *Little sense in developing offset methodologies for sectors proposed to be covered soon (ie. agriculture)*

What about the voluntary markets?



- Accredited abatement traded in voluntary market is ALSO consistent with Kyoto (carbon) accounting provisions, designed by AGO.
- Green Paper criticisms of the verification mechanisms in the voluntary trading market are not credible and are inconsistent with statements and favourable positions taken on other issues.
- Arguably about control of revenue (as number of permits issued by Govt could be reduced, and key goal of most efficient reduction in emissions actually achieved)

How does this impact organics processors?



- Only option for organics processors (who don't operate landfills) is voluntary emissions trading (VET) scheme
- AGO paper on impact of CPRS on voluntary emissions trading VET released [end] December 2008
- Many large corporate buyers active in voluntary market will now be in mandatory CPRS.
- However, consumers will demand products embodying lower carbon intensity – won't care if supplier is in the voluntary scheme or the CPRS

So what about soil carbon ?



- Green Paper position on agriculture
 - Agricultural contribute 16% of national emissions
 - Direct soil emissions, synthetic fertilisers, soil disturbance, leachate and runoff, manure fertiliser, green manures and crop residues all identified as aspects of agricultural production
 - Emissions are highly variable due to management practices and climatic conditions

Soil carbon proponents position

- Lobbying position to Canberra
 - Soil carbon sequestration is THE immediate abatement option, and must be covered from initiation of the CPRS *
 - The obstacles are the Kyoto rules, not technical
- Key issues
 - Measurement – the science
 - Cost effective “indirect measurement” – modelling, estimation and proxies
 - Transaction costs – cooperative options for affordability, following “aggregator” models in US

* Agriculture and soils since agreed for CPRS inclusion

Comments and discussion

- Carbon intensity as part of sales proposition/positioning in market
- Voluntary market operation and carbon price in Australia – continued delay
- Indirect estimation may provide greater incentive for diversion of organics (barriers to implementation are lower)
- Direct measurement of sequestration appears complex and fraught with both competition and efficiency issues
- CPRS likely to impact on trend to closure/consolidation of landfills
- Impact on organics processing:
 - Value of licensed infrastructure facilities
 - Gate fees
- AD and other trends in EU and UK

Note: this paper was presented prior to negotiated CPRS amendments between the ALP and Liberal party in November 2009, and subsequent Copenhagen forum.

For more information:



Angus Campbell

Director

Recycled Organics Unit

www.recycledorganics.com

a.campbell@recycledorganics.com

Phone: 0414 385 226

