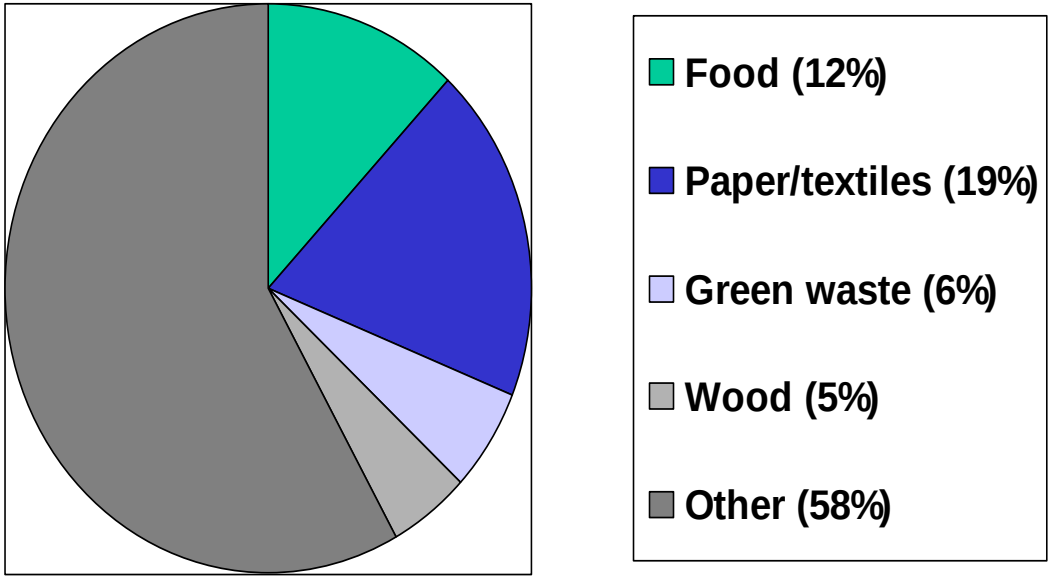
QTC/LGIS Local Government Carbon Forum

Friday, 15 May 2009—Seminar Room East, UQ Business School Downtown

Immediate priorities

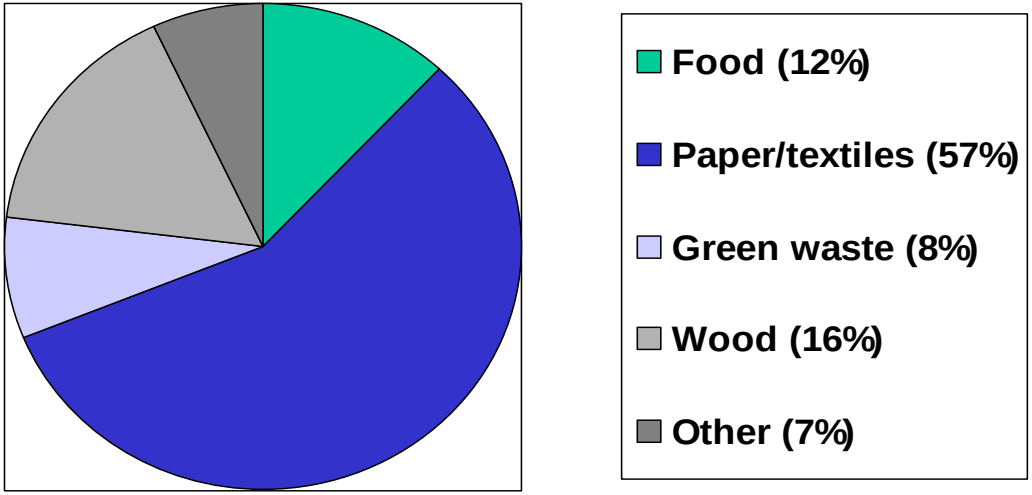
- Know your waste
- The kicker in legacy waste
- Using price to limbo dance
- Marginal abatement cost curve
- Forests for permits

Waste default values of MSW + C&D + C&I



Adapted from the National Greenhouse and Energy Reporting (Measurement) Determination 2008 v1.1

GHG emission intensity of waste components



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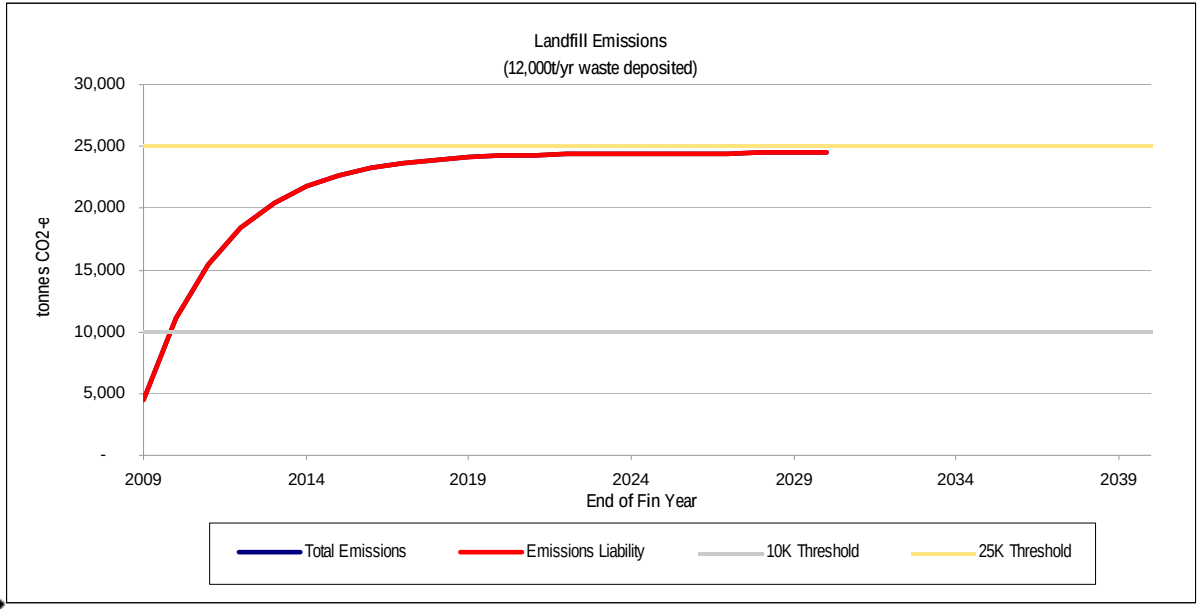
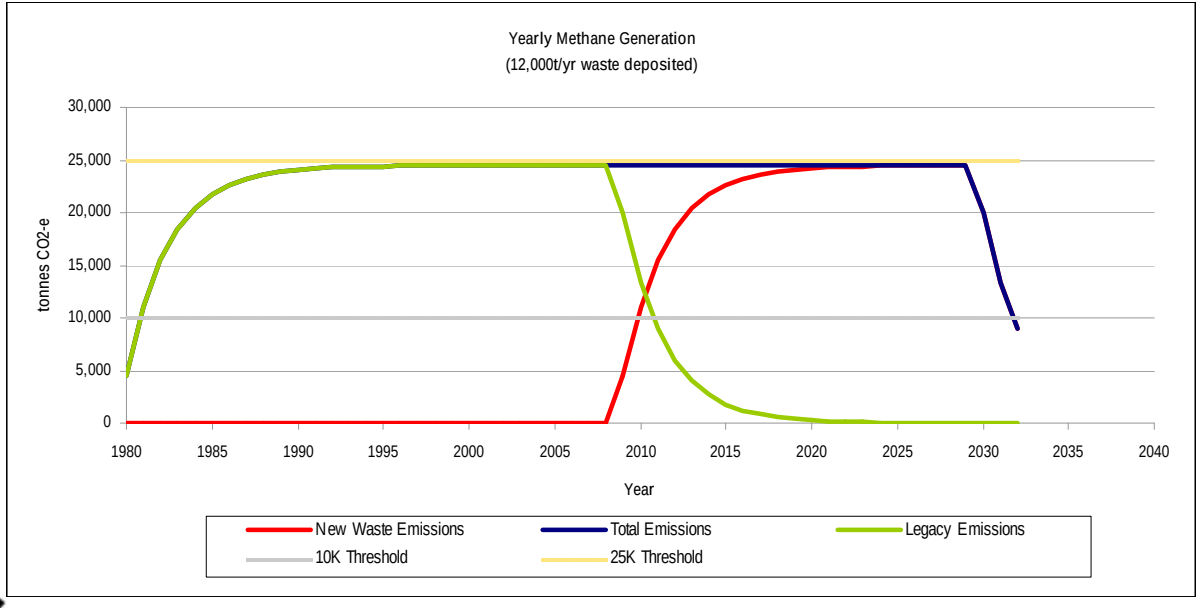
Minimum waste receipts to trigger thresholds



Emissions Curve: the power of compound waste

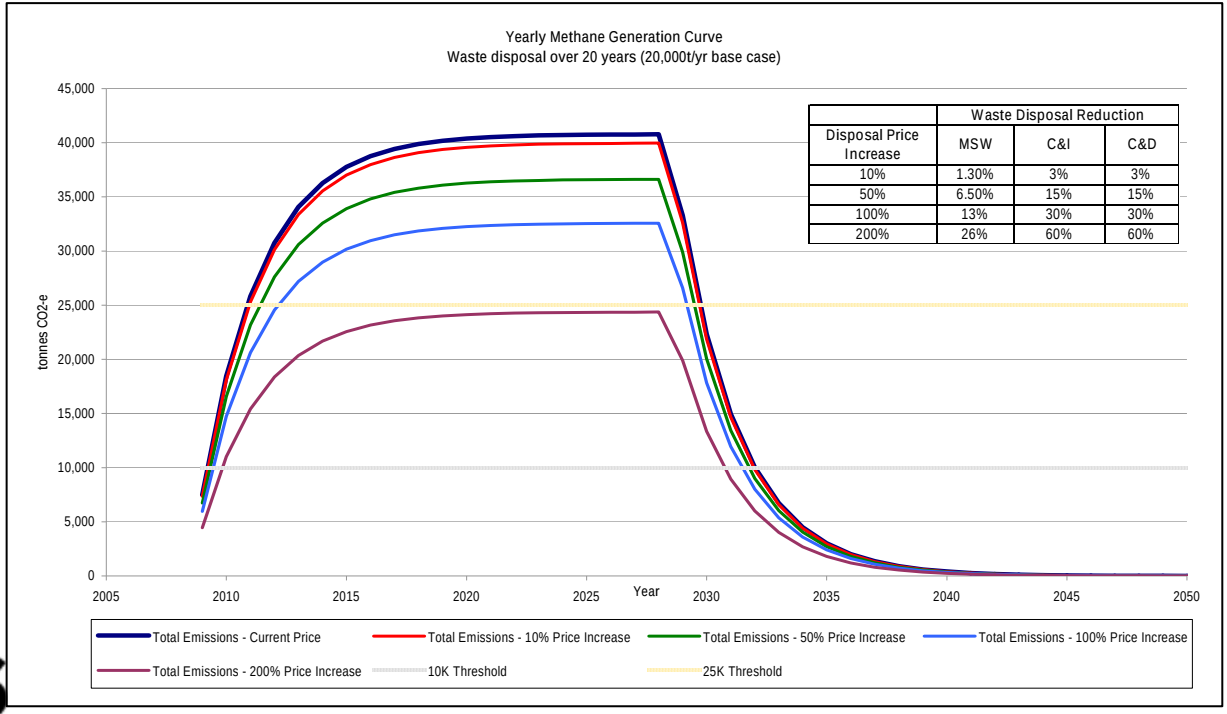


Using price to reduce permits needs

- Price elasticity for C&I, C&D and other industry waste is -0.30. Business can respond readily to disposal price increases by redirecting to recycling or implementing avoidance measures
- Price elasticity for MSW is -0.13. Household response to price is limited to discretionary trips to the tip

- Source:
- 1. Jenkins 1993. The Economics of Solid Waste Reduction: The Impact of User Fees. Edward Elgar: London.
- 2. Skumatz 1990. Volume Based Rates in Solid Waste: Seattle's Experience. Cited in Jenkins 1993.

Using price to reduce permit needs (2)



	Waste Disposal Reduction		
Disposal Price Increase	MSW	C&I	C&D
10%	1.30%	3%	3%
50%	6.50%	15%	15%
100%	13%	30%	30%
200%	26%	60%	60%

Forest Sink Abatement Projects

- Native hardwood forests sequester CO2 at 10 to 24 t/ha/y depending on soil fertility and rainfall
- Up to 40t/ha/y can be achieved with wastewater irrigation and correct species selection
- Forest sink owners can opt into the ETS and sell permits to liable entities OR
- Remain in the Voluntary Carbon Offset scheme

Forest Sink Abatement Projects

- Costs per hectare
  - Seedlings $1 - $1.20each @ 650/ha = $700
  - Soil preparation (herbicide and ploughing) = $800
  - Planting = $1,000
  - PLUS LAND COST + OPPORTUNITY COST + operational cost (herbicide + accreditation etc)
- Revenue per hectare
  - 18t/y @ $25/t C = $450/y
  - 18t/y @ $35/t C = $630/y

Forest Sink Abatement Projects

- 'Permit neutral' isn't the same as 'Cost Neutral'
  - Buy permits at auction when cheap, say less than <$20/t
  - Retire own permits and sell excess on the market when price is high, say greater than $30/t
  - Become a 'price giver' not a 'price taker'

Forest Sink Abatement Project

- Council needs to purchase 100 permits/y but forest project only sequesters 80 permits/y
- Year 1: Carbon Price = $15/t

  Council purchases at auction 100 permits = $1,500
- Year 2: Carbon Price = $30/t

  Council has 160 forest permits (80 year 1 + 80 year 2)

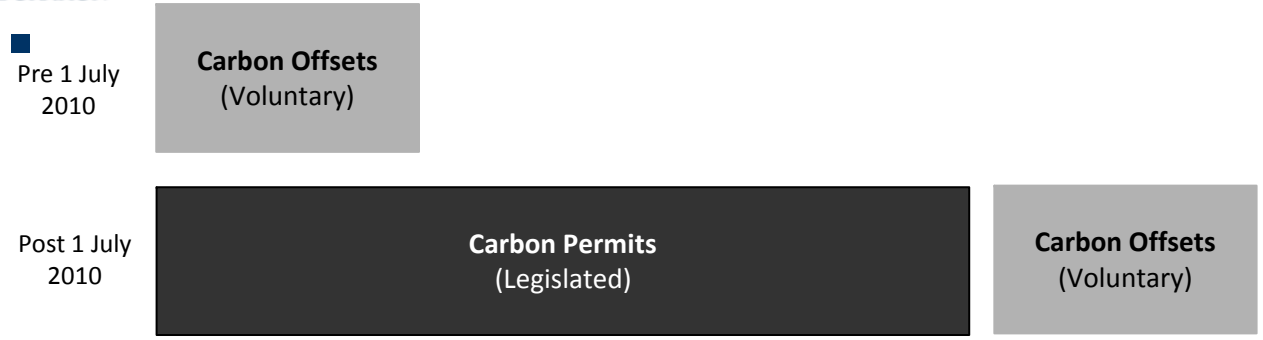
  Retires 100 to cover emissions and sells remaining 60 @ $30 = $1,800

  Profit = $1,800 - $1,500 = $300
- 'PRICE GIVER' not a 'PRICE TAKER'

Forest Sink Abatement Projects

- Project Establishment & Administration
  - Emissions Abatement Study: GHG emissions used to establish and maintain the forest & emissions avoided from cessation of grazing or farming
  - Project Management Plan: risk assessment, pest and vector control, drought, fire and maintaining a buffer
  - Eligibility Statement and assessment of 'additionality' for voluntary carbon offsets only NOT in the ETS (at this stage)

Australian Carbon Markets



- Permits
  - Permits at CPRS auctions
  - Allocated permits
  - Forestry 'opt-in' permits
  - International units
- Offsets
  - Greenhouse Friendly™
  - National Carbon Offset Standard (NCOS)
  - Renewable Energy Certificates
  - International offsets

Forest Sink Abatement Projects

- Benefits of CPRS opt-in:
  - Larger market and bigger clients reduces trading and brokerage fees
  - Customers find you – not the other way round
  - Can offset own permit liabilities from landfills and wastewater treatment plants
  - Simpler rules and no (current) requirement for 'additionality'

Forest Sink Abatement Projects

- Benefits of Voluntary Carbon Offset Scheme
  - Smaller, boutique market allows customers to be selected
  - Price premium for bio-diverse forests – has been 3 to 4 times the international price
  - Large corporations likely to continue to pay more for bio-diverse forests if they satisfy other criteria, ie wildlife habitat, recreation and amenity values.

Forest Sink Abatement Projects

- Next Steps
  - Develop business model (land availability, soil type, rainfall, availability of wastewater, species selection, carbon sequestration rate, establishment and operational cost)
  - Up to 50% subsidy for wastewater reuse schemes
  - Approval processes (Eligibility Statement, Emission and Abatement Study, Project Management Plan)
  - Carbon trading (ETS and/or voluntary offset scheme)

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