

Does QLD really need a waste levy?

Tuesday 24th April

Mike Ritchie – National General Manager
Marketing and Communications



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Voluntary targets

NSW	2014	66% diversion MSW
	2014	63% C+I
VIC	2013	65% MSW
	2013	80% C+I
WA	2020	100% diversion
ACT	2010	100%
SA	2010	75% MSW
	2010	30% C+I
NT		no target
QLD		no target
TAS		in development



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Number of planets with confirmed life

1



Are we sustainable?

Climate change consequences

2 degree increase in temperature:

- Destruction of the Great Barrier Reef
- Rising sea levels- coastal flooding
- Increase in cyclone severity
- Drought



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SITA
Environmental
Solutions

The waste industry has a key role



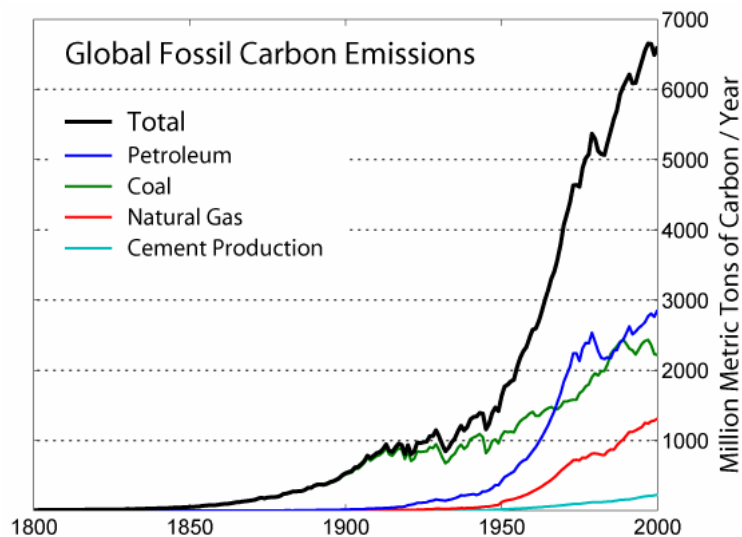
- Waste industry - 3% or 16 MT/yr
- The Australian waste industry could reduce total emissions by 6 to 8%



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Drastic increase of CO2 emissions



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In a carbon constrained world, sustainability means:

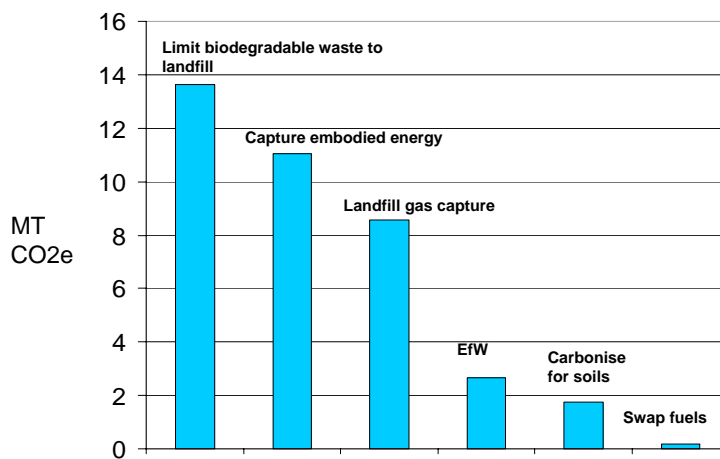
1. Reducing waste to landfill – 13 MT
 2. Increasing resource recovery – 11 MT
 3. Capturing emissions from landfills – 9 MT
- = 35 MT per year or 8%

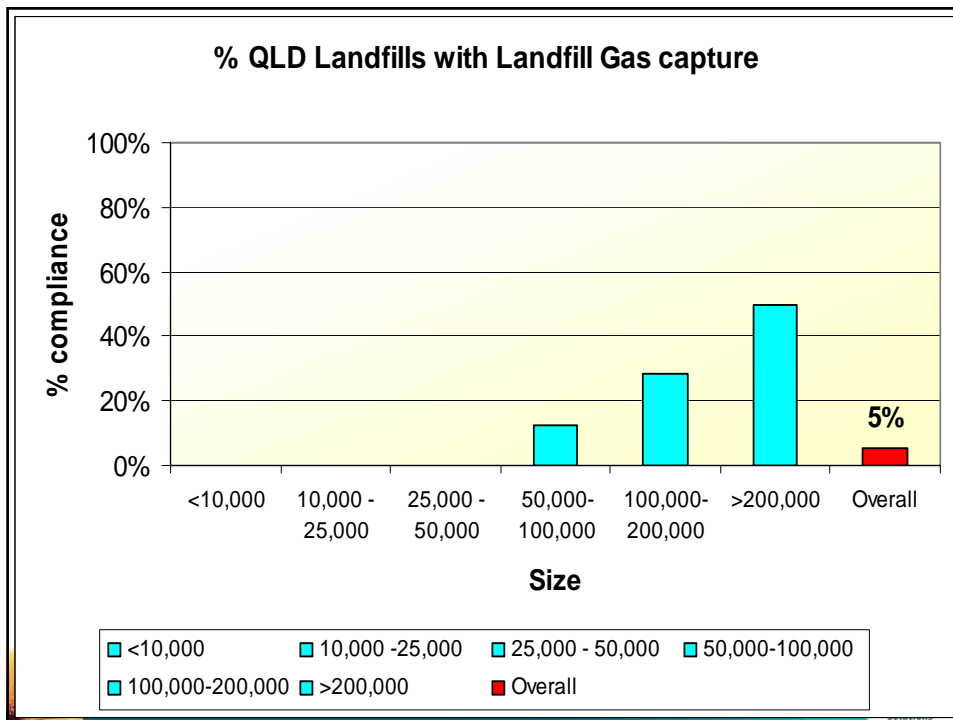


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Potential abatement (MtCO₂e)





Only two real levers:

1. Regulation
2. Market Based Instruments (MBI)



What are Market Based Instruments

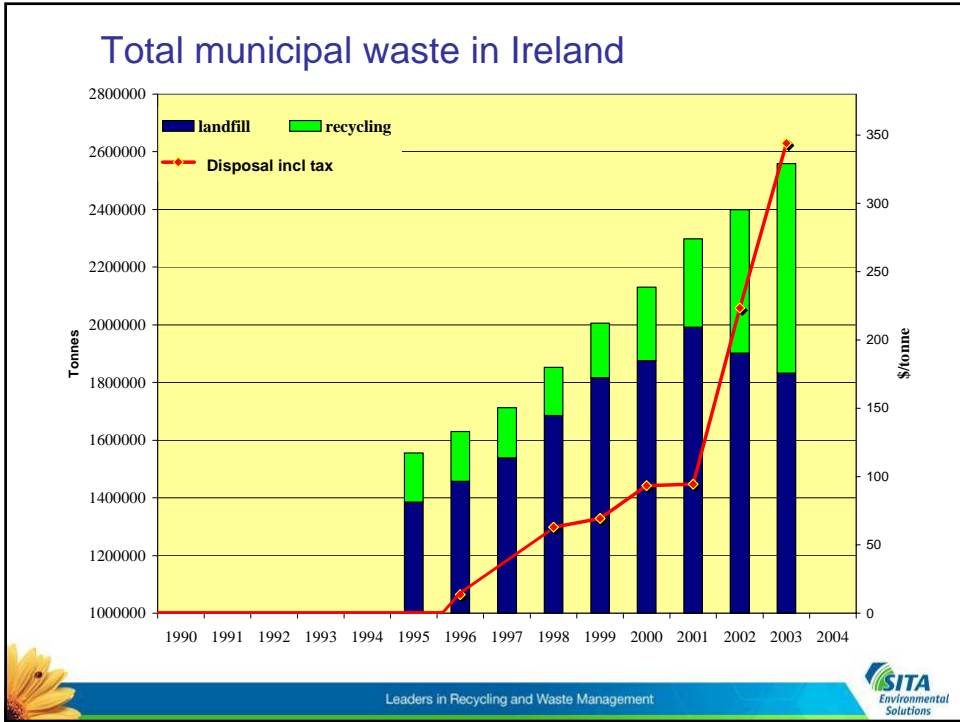
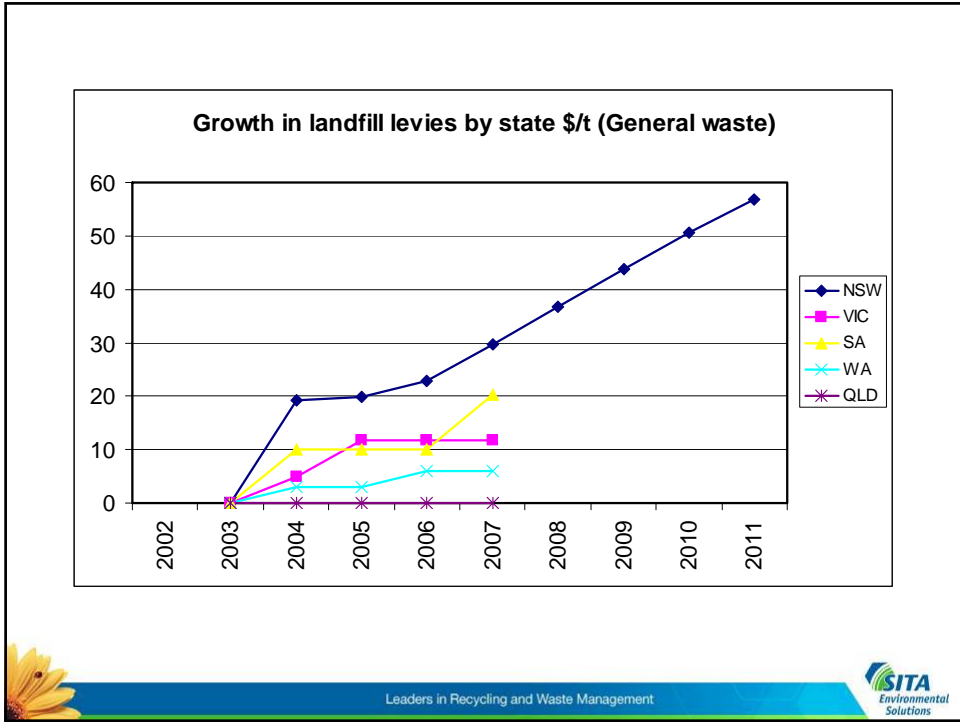
- Charges and levies (e.g. landfill levy)
- Tradeable certificates (e.g. cap and trade)
- Subsidies
- Deposit schemes



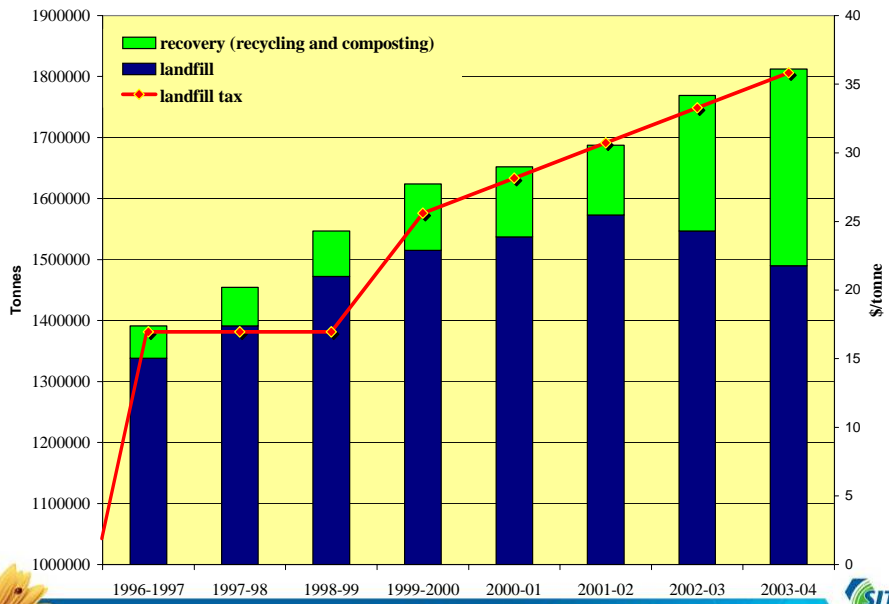
Justifications for landfill levies

- 1. Account for the externalities of landfills (PC)**
 - Stern CO2 \$110 /t
 - MSW = \$125/t unpriced externalities BAU
- 2. Alter the economic balance of recycling and landfill**
 - (SA and NSW)
- 3. Raise funds for recycling initiatives (WA)**
- 4. Drive specific wastes from landfill**
 - Prescribed Industrial Waste (Vic)





Total municipal waste in Wales



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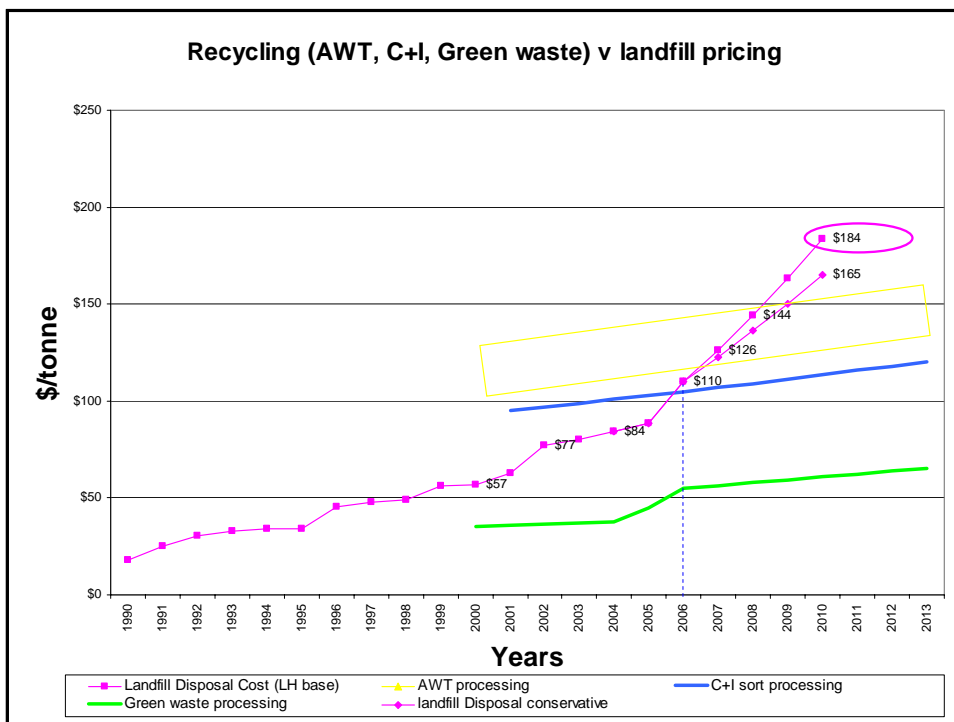
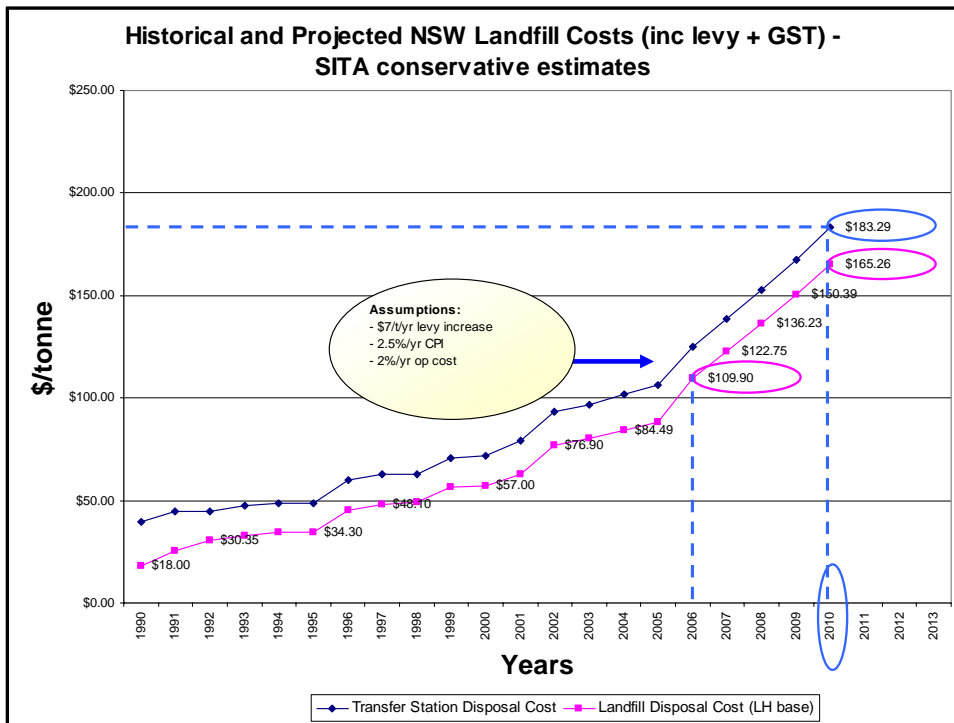


NSW experience

+

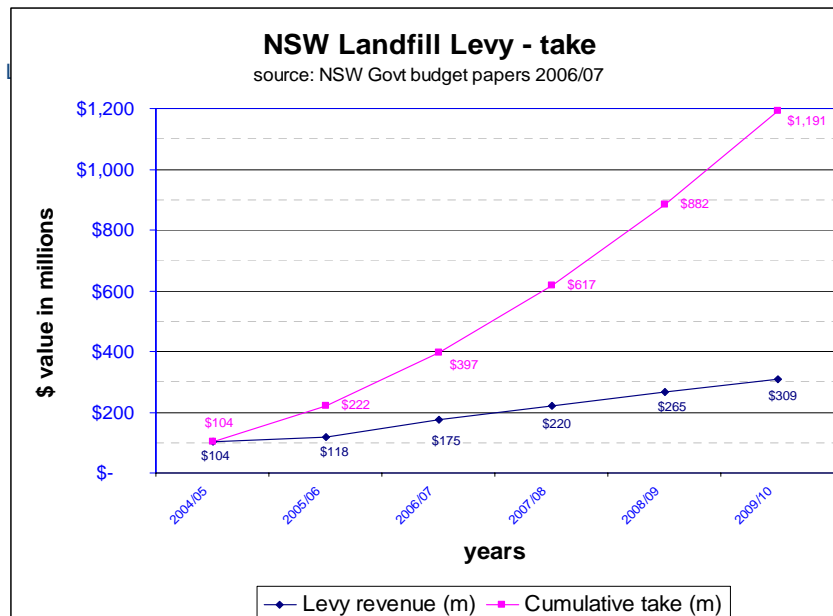
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Significant hypothecation 68%

- \$700 million
- \$426 m to Local Government / Environment
- Supported by local government with conditions



Situation QLD

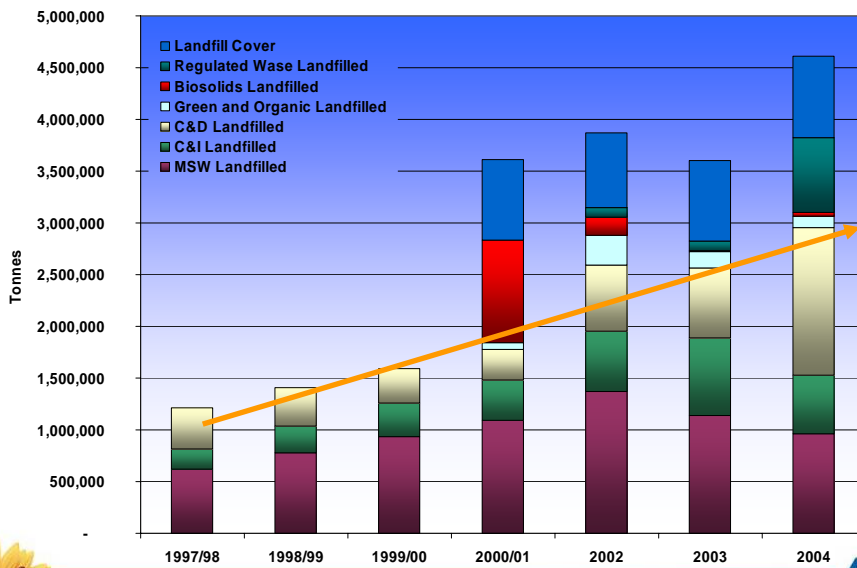
- growth in waste
- Landfill cheap
- State government - no new taxes



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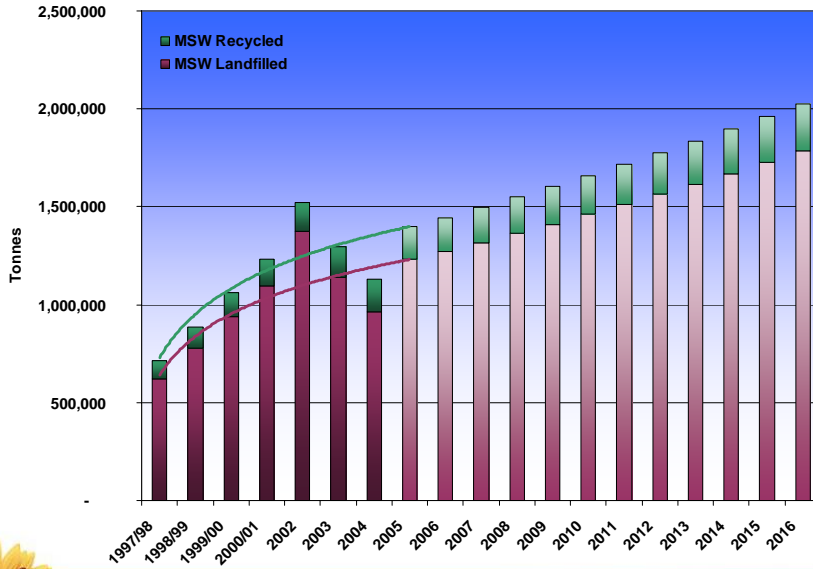
Total waste to landfill - Queensland



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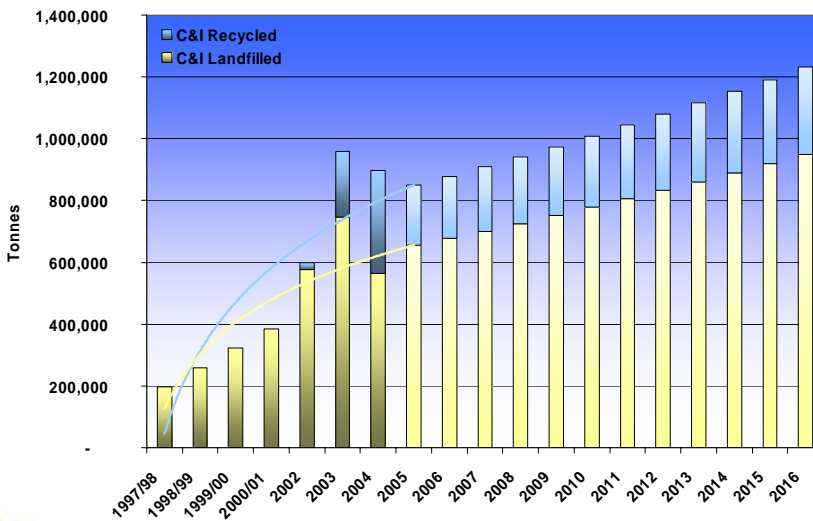
MSW Landfill Trend in Queensland



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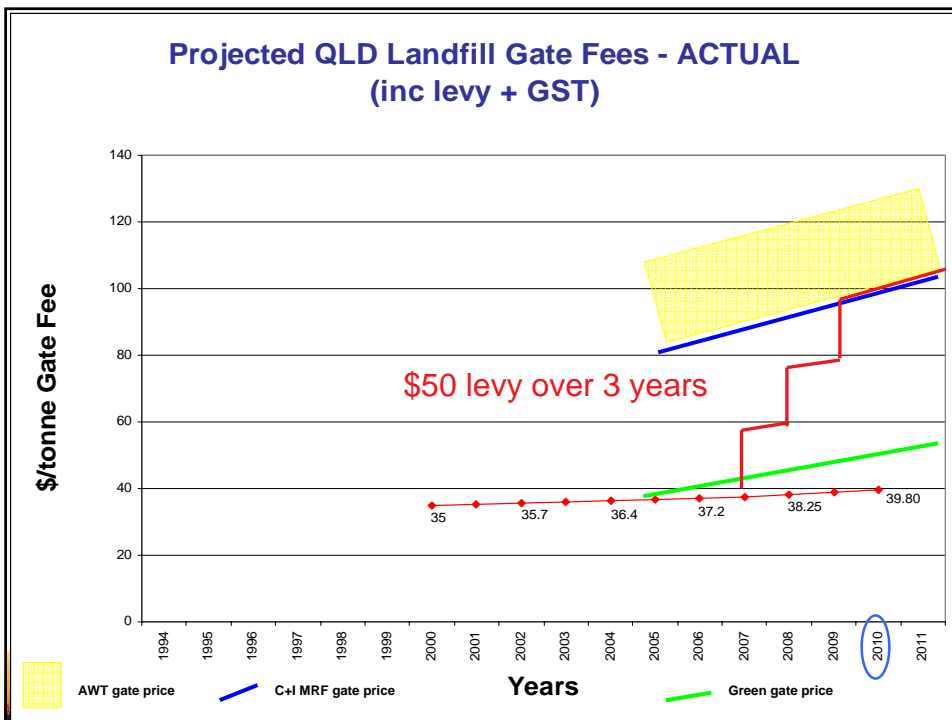
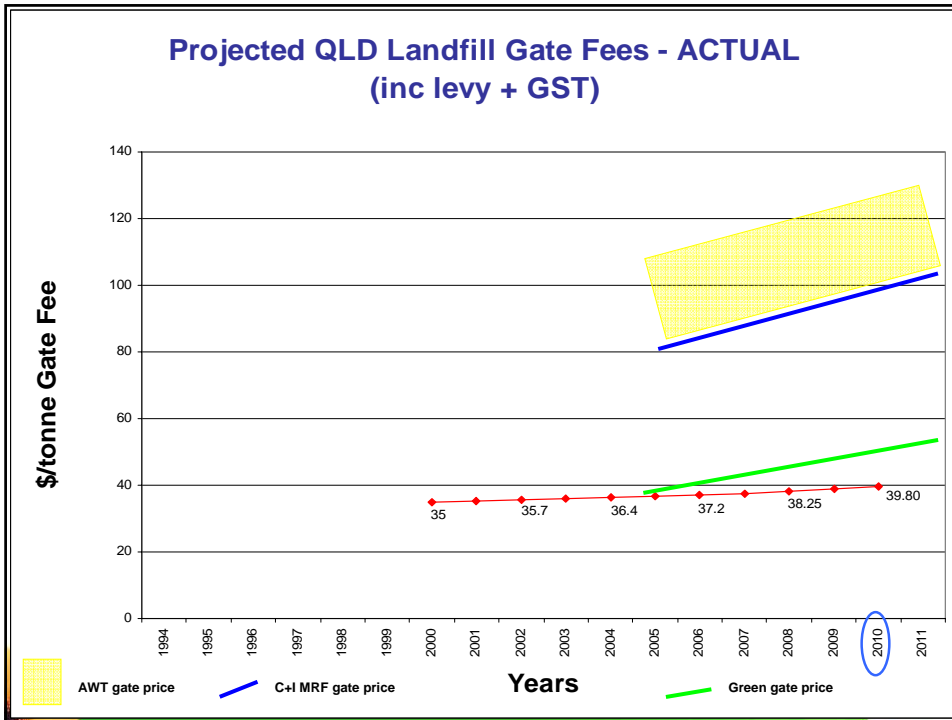


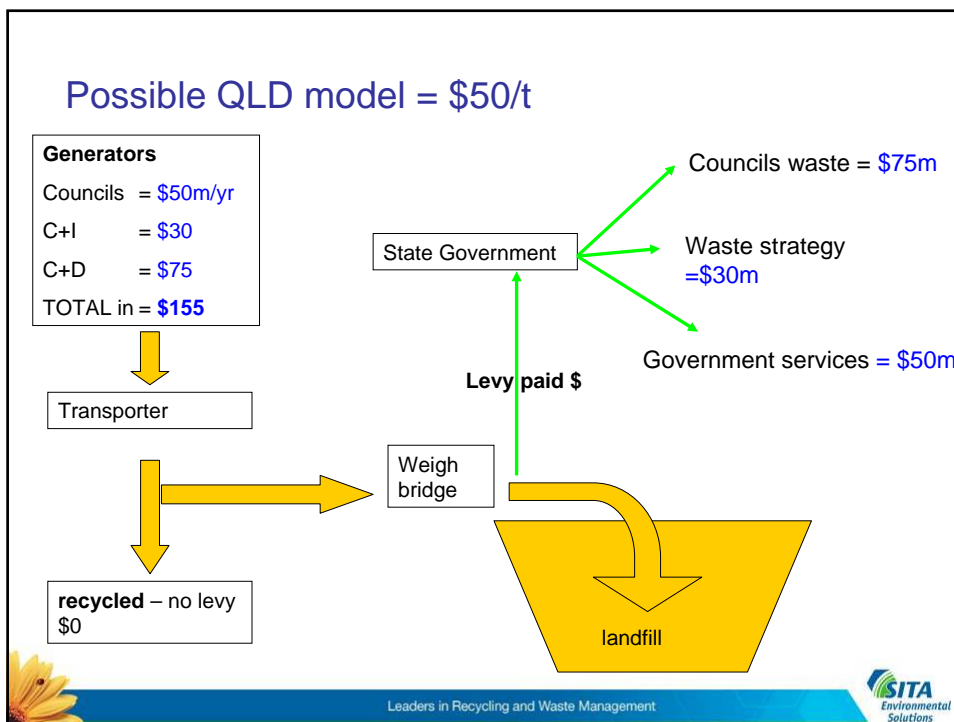
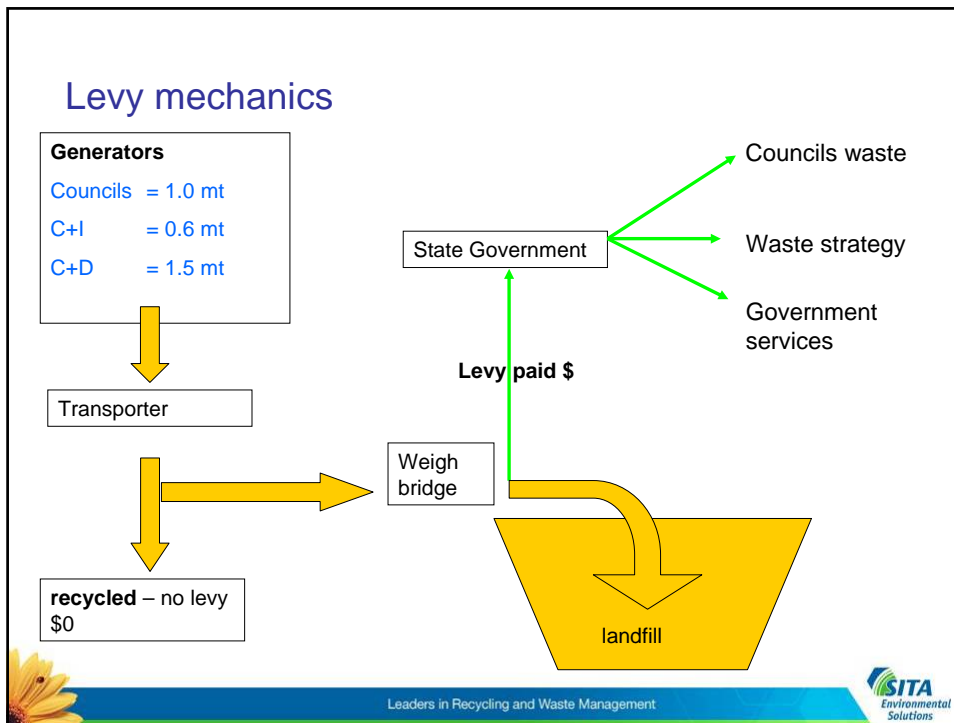
C&I Landfill Trend in Queensland



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Expenditure of levy pool

Local Government - \$75 m

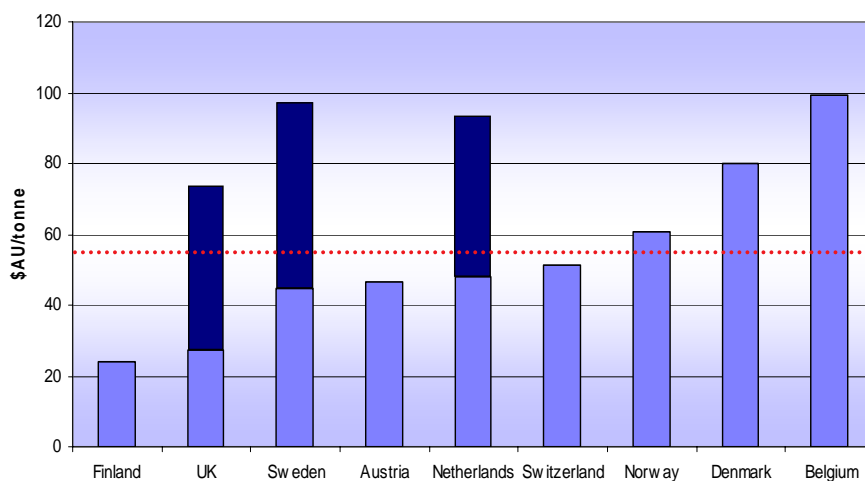
- landfill gas capture
 - weighbridges
 - recycling rebates

State Government - \$30 m

- enforcement,
 - infrastructure,
- other programs - \$50 m



Landfill tax in European countries (\$AU/tonne):
the escalador system



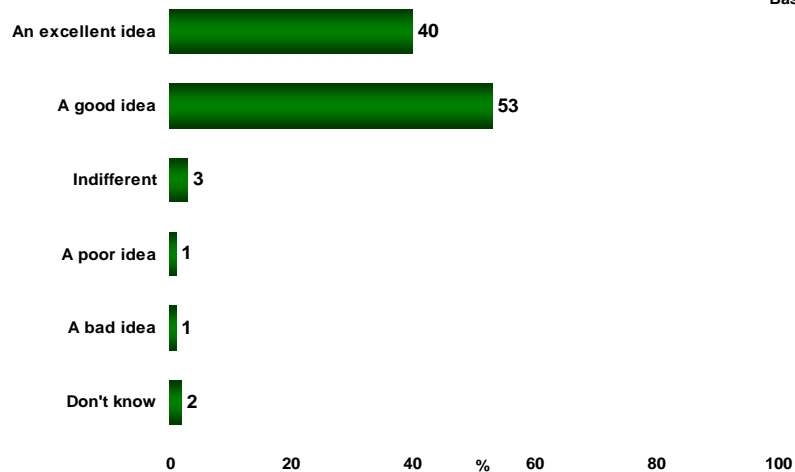
Implications

- Jobs
- New industries
- New revenue
- Significant greenhouse gas benefits = 1.37 MT CO₂e /yr minimum



Waste generators are Willing to Pay

Base, n=701



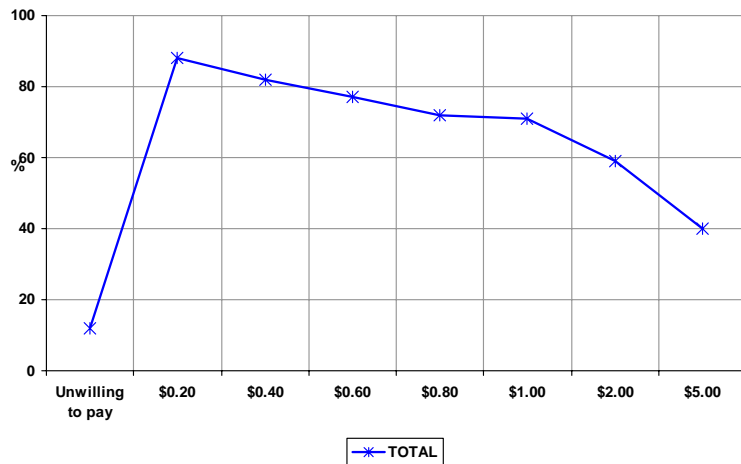
MEAN RATING: 4.3 out of 5

Q1:



Willingness to pay additional waste collection weekly fee (prompted)

Base, n=701



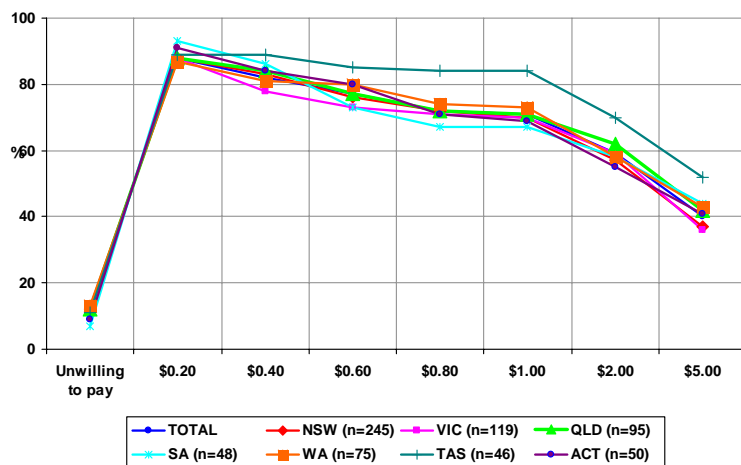
Q3:

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Willingness to pay additional waste collection weekly fee by State (prompted)

Base, n=701



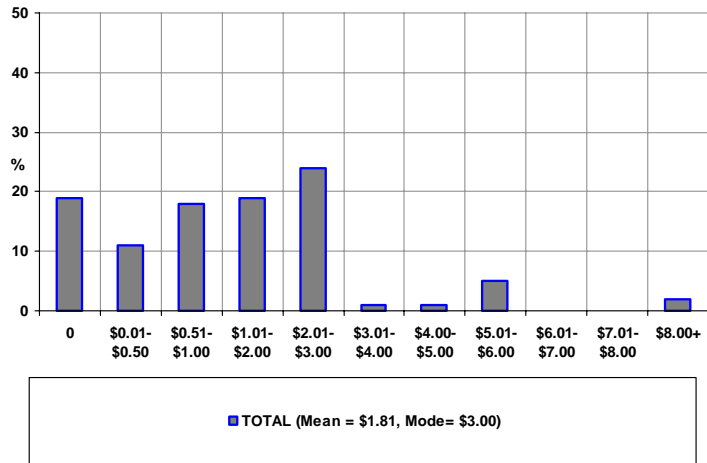
Q3:

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Additional weekly fee considered acceptable to householders (spontaneous)

Base, n=701



Q4:

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Residents are:

- willing to pay
- \$94 / year or \$1.81/week
- \$50/t levy would add \$1/week

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Conclusions

1. Address waste generation and climate change
2. The community is strongly willing to pay
3. \$50/t levy raises \$155m per year
4. Australian and international experience says it can be done



18 April 07, Financial Times

“Governments must regulate or change the economics. The UK is doing both”.





Climate change benefits

Diverting 50% would save landfill gas generation:

$$\text{MSW} = 0.5\text{mt} \times 1.14 \text{ tCO}_2\text{e} = .570 \text{ MT CO}_2\text{e}$$

$$\text{C+I} = 0.3\text{mt} \times 1.9 \text{ tCO}_2\text{e} = .570$$

$$\text{C+D} = 0.75\text{mt} \times 0.31\text{tCO}_2\text{e} = .232$$

1.37 MT

+ embodied energy of recycled products

+ funding for additional gas capture



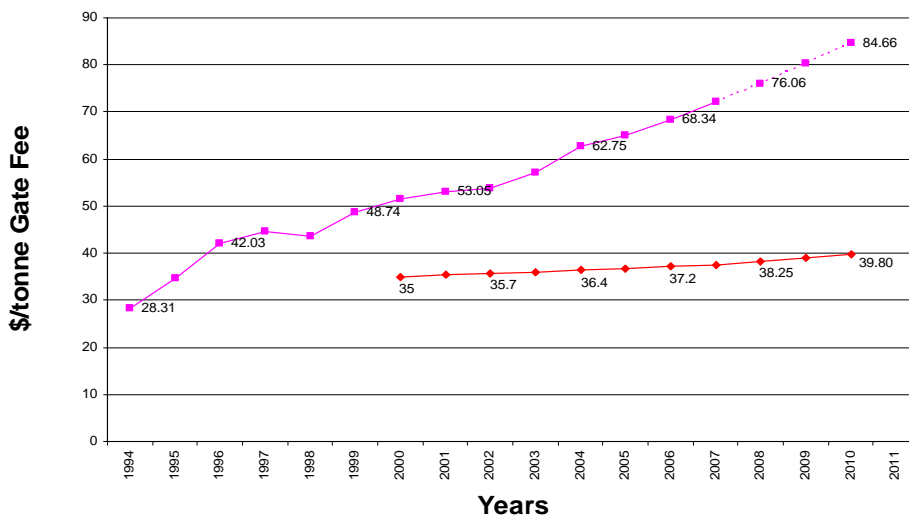
Appendix



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Projected QLD Landfill Gate Fees - SHINGLE RATE v ACTUAL (inc levy + GST)



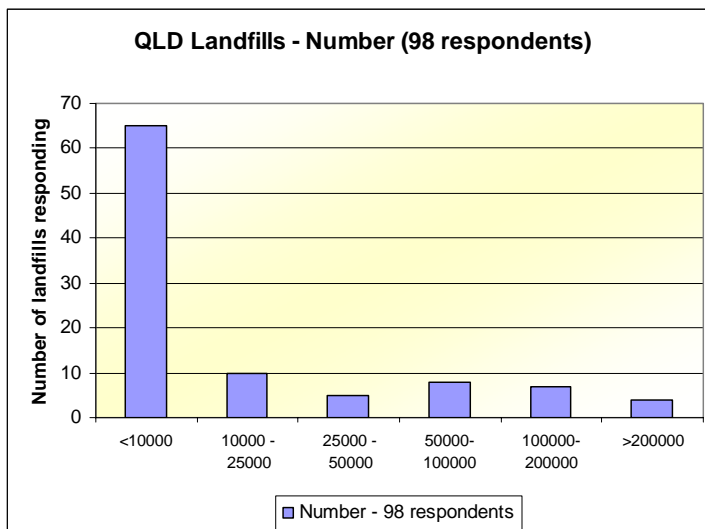
Q3) **These technologies are a bit more expensive than disposing household waste to landfill** (which is the current practice) because the waste has to be processed and refined.

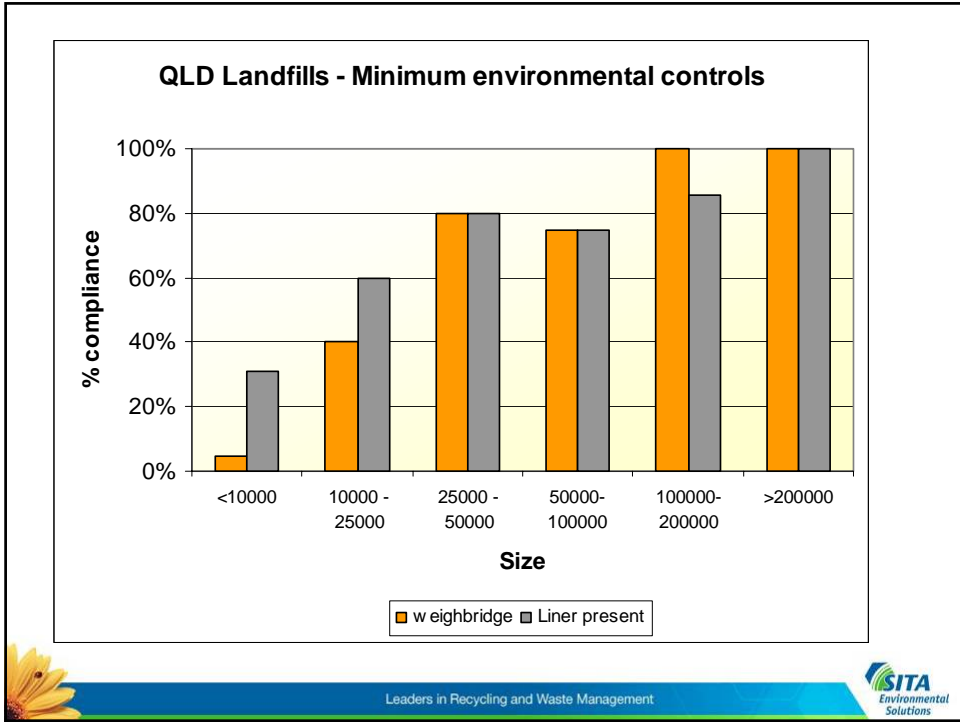
If such technology was available to your local Council and up to 70% of your waste could be diverted from landfill into compost or green energy, would **you** be willing or unwilling to pay the following weekly amount **in addition** to your regular garbage collection rates?

- \$5 a week
- \$2 a week
- \$1 a week
- 80 cents a week
- 60 cents a week
- 40 cents a week
- 20 cents a week



Landfill Survey

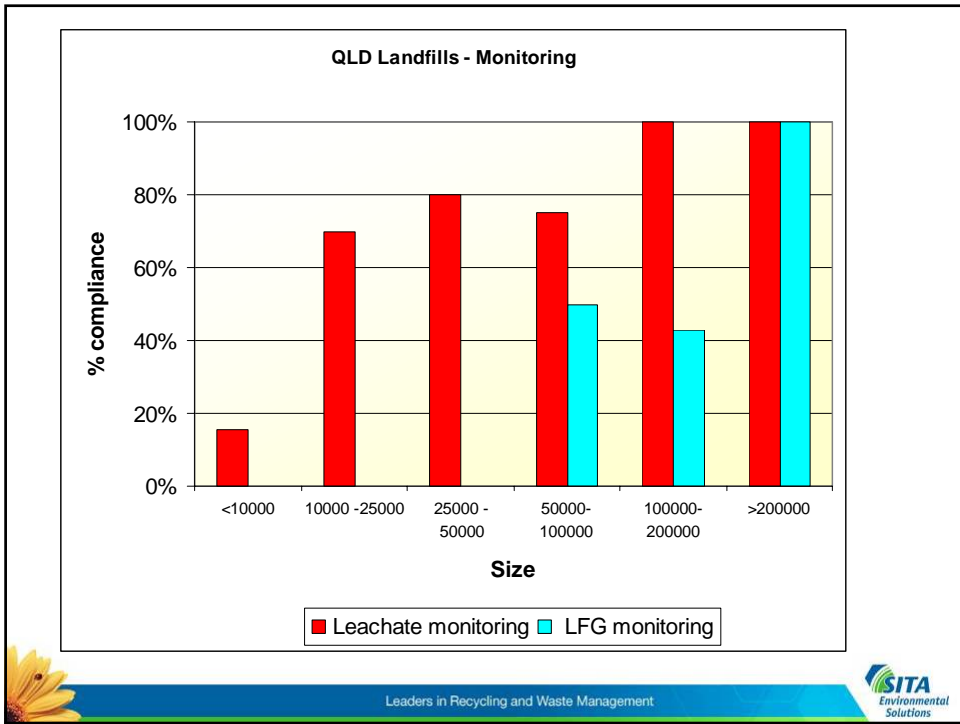
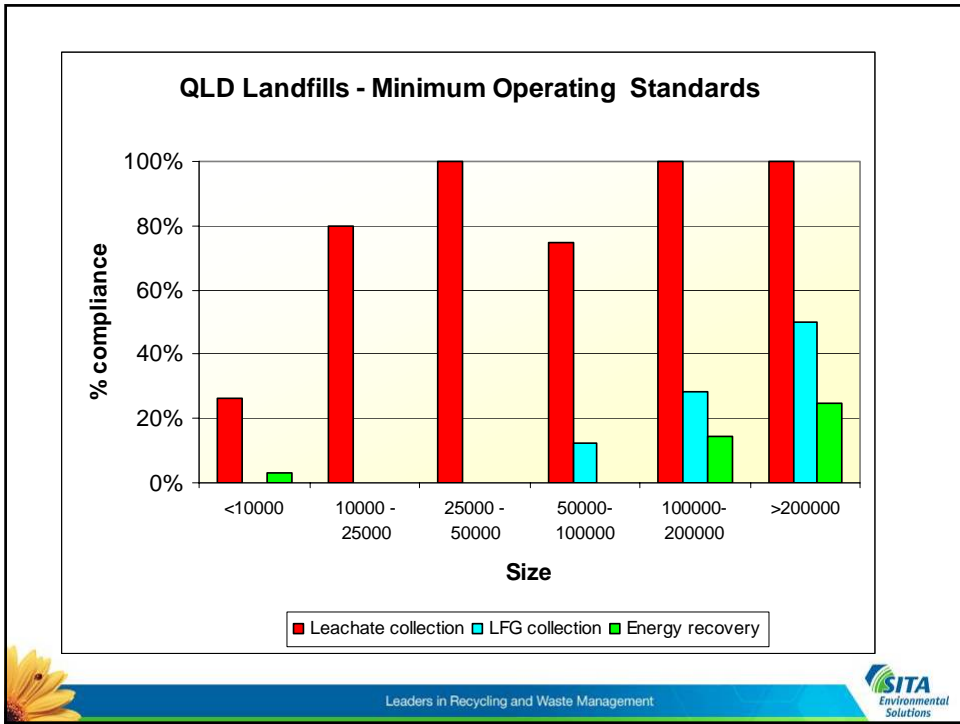




The Queensland Experience

The key value of a levy is it changes the market economics of recycling

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Major landfills in South-East Queensland with gas capture

Name of landfill	Area	Gas capture
Rockdale	Brisbane	√
T Tree Gully	Brisbane	√
Swanbank	Brisbane	√
Molendinar	Gold Coast	√
Suntown	Gold Coast	√
Tugun	Gold Coast	-
Reedy Creek	Gold Coast	-
Stapylton	Gold Coast	-
Noosaville	Noosa	-
Buderim	Maroochy	-



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Landfill gate fees


Disposal site	Customer charge/tonne excl GST
BCC Transfer Station – Nudgee	\$63.6
BCC Transfer Station	\$80.7
Caboolture SC-Commercial	\$62
Collex – Gold Coast	\$50.50
Collex Transfer Stn, Northgate	\$44
Murrarie Landfill (Front lift Trucks)	\$44.6
Logan Waste Services	\$55.8
Pine Rivers, Strathpine (Dakabin)	69.8
Thiess - Swanbank	\$69
Tweed Shire Council	\$58.5



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Key Action Areas	Additional amount required to meet the target	Additional processing / diversion required to meet the target	Additional expense to extract these tonnes \$/t	\$M/yr
C+I total	2.1 Mt more than now			
C&I Source Separation		0.84	25	21
C&I Mixed Sorting		1.26	35	44
MSW – Total	1.4 Mt more than now			
MSW - AWT		0.9 Mt so must process 1.50 at 60% diversion rate	35	53
MSW Kerbside recycling		0.25	-	-
MSW Garden Organics		0.15	30	5
MSW National Packing Covenant		-	-	-
MSW Away from recycling		0.05	20	1.0
MSW Other minor waste streams – tyres, mobiles...		0.05	20	1.0
Education	-	3.30	3 per generator	10
TOTAL	-	-	-	134.0



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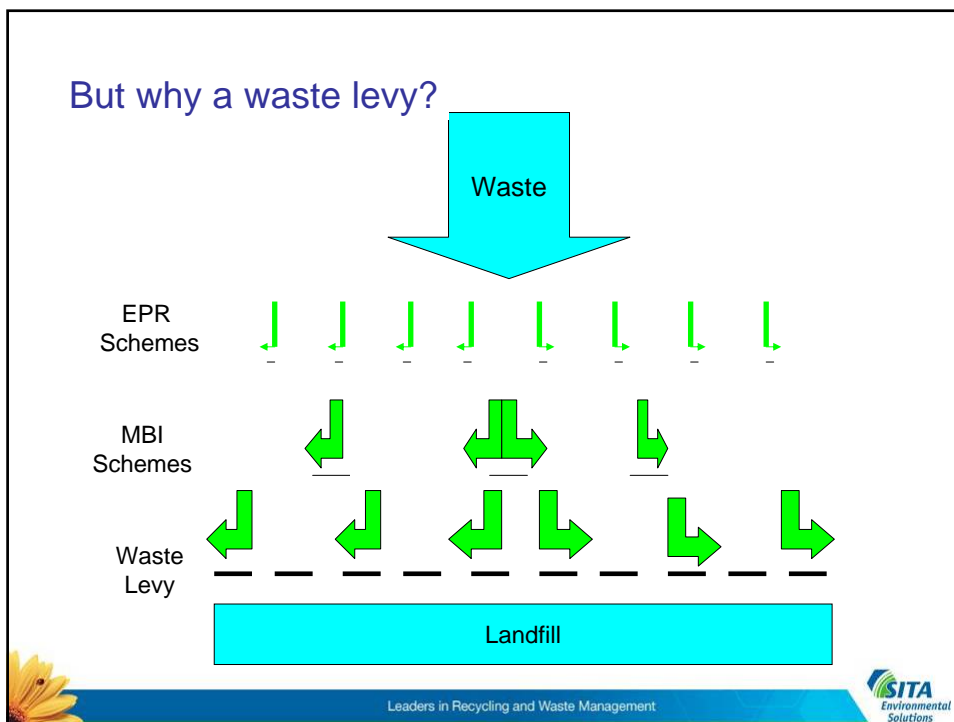
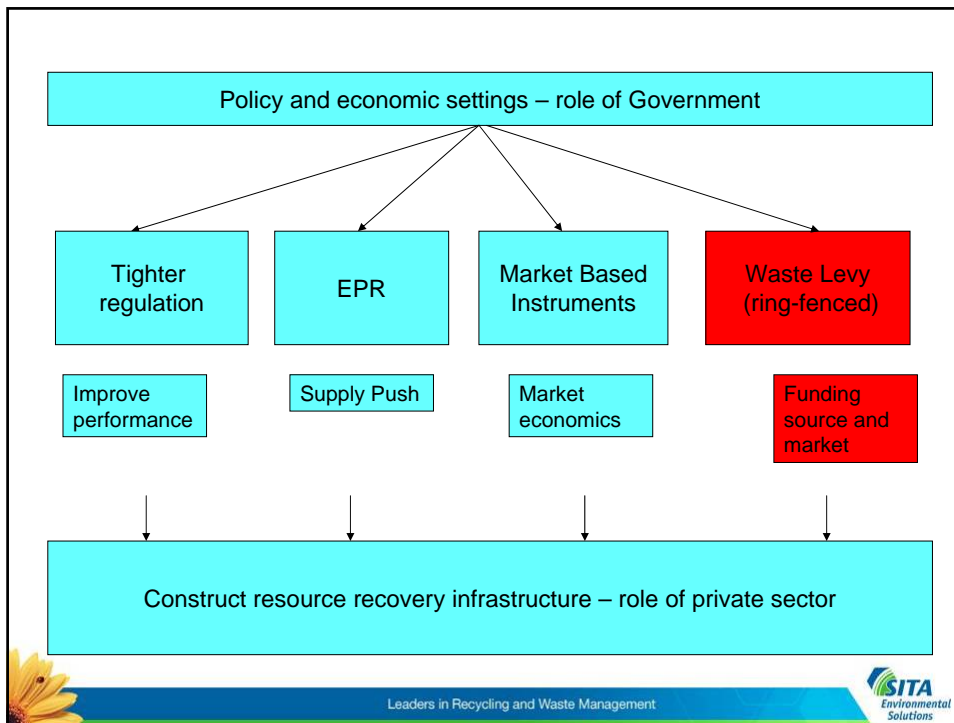
SAMPLING - Region

Base, n=701

Region	(N)
Sydney	118
Melbourne	79
Wollongong and Illawarra	74
Perth	74
Newcastle and Central Coast	57
Canberra	51
Adelaide	49
Gold Coast	49
Geelong	48
Brisbane	47
Hobart	46
Refused	8



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Decision of NSW Government

- Rebates NOT offered for:
 - Daily cover
 - Intermediate cover
 - Venn
 - Stockpiled materials
- Rebates offered:
 - Final closure
 - Below water table filling



Levies in Australia

NSW	\$30	to \$58 in 2010
VIC	\$11/t	prescribed waste = \$250/t by 2008
WA	\$6/t	
ACT	\$80/t	
SA	\$20/t	proposal to \$55/t by 2013
QLD	\$0/t	recommend investigation \$50/t levy
TAS	\$0/t	
NT	\$0/t	



Qld revenue projections @ \$30/t – NSW model



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Q1) There are new technologies available which can convert waste in the household garbage bin into compost or green electricity.

Half of the waste in an average household waste bin is made up of food scraps and garden waste. The new technology allows these organic wastes to be composted while another converts them into a gas and then burns this gas to generate green electricity. Other material such as cardboard, glass and plastic can also be recycled from the waste bin.

What do you think of this idea ?

1. A bad idea
2. A poor idea
3. Indifferent
4. A good idea
5. An excellent idea
6. (Don't know)



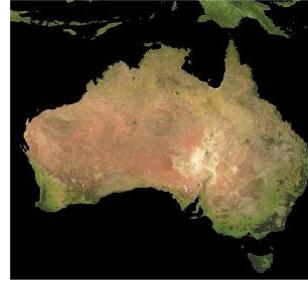
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Australia and greenhouse gases

Australians - highest emitters per person in the world

“There is a high price to delay. Weak action in the next 10-20 years would put stabilisation even at 550 ppm CO₂e beyond reach – and this level is already associated with significant risks”
(Sir Nicholas Stern)

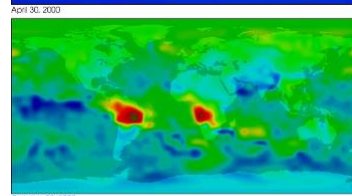
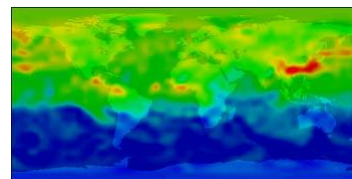


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Greenhouse gases - % effects

- Water vapour 36-70%
- Carbon dioxide 9-26%
- Methane 4-9%
- Ozone 3-7%



Carbon Monoxide Concentration (parts per billion)
50 220 390



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Recycling waste and climate change

- Plastic
 - Recycling one tonne of plastic saves enough energy to run a refrigerator for a month or 84% of the energy it would take to make one tonne of plastic from raw material
- Glass
 - Recycling a glass jar saves enough energy to light a bulb for 4 hours
 - Recycling glass creates only half the greenhouse gas of making new glass from sand
- Paper
 - Recycling one tonne of paper saves: 13 trees, 2.5 barrels of oil, 4100 kwh of electricity, 4 m3 of landfill space, 780 litres of water

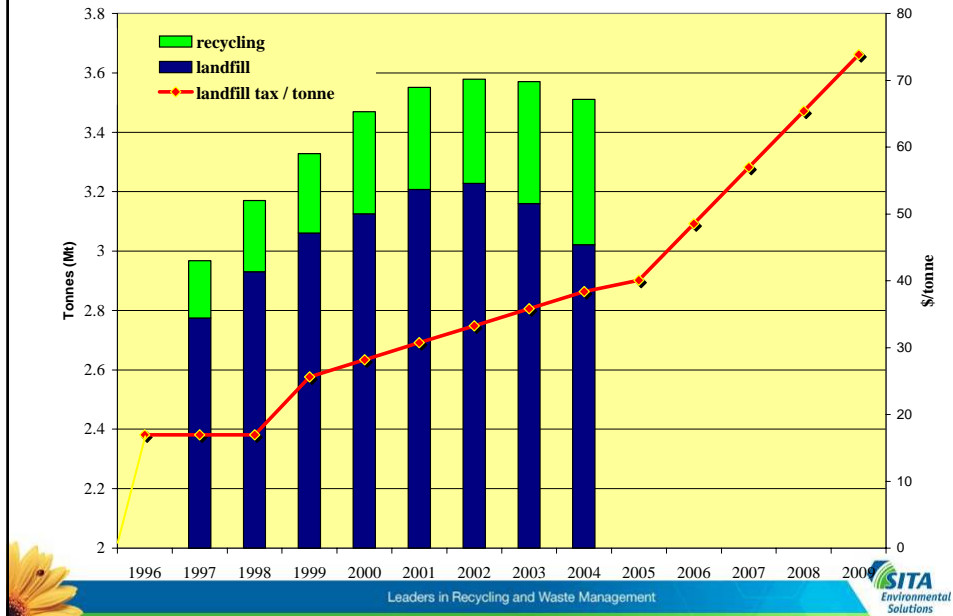


Government announced levy changes

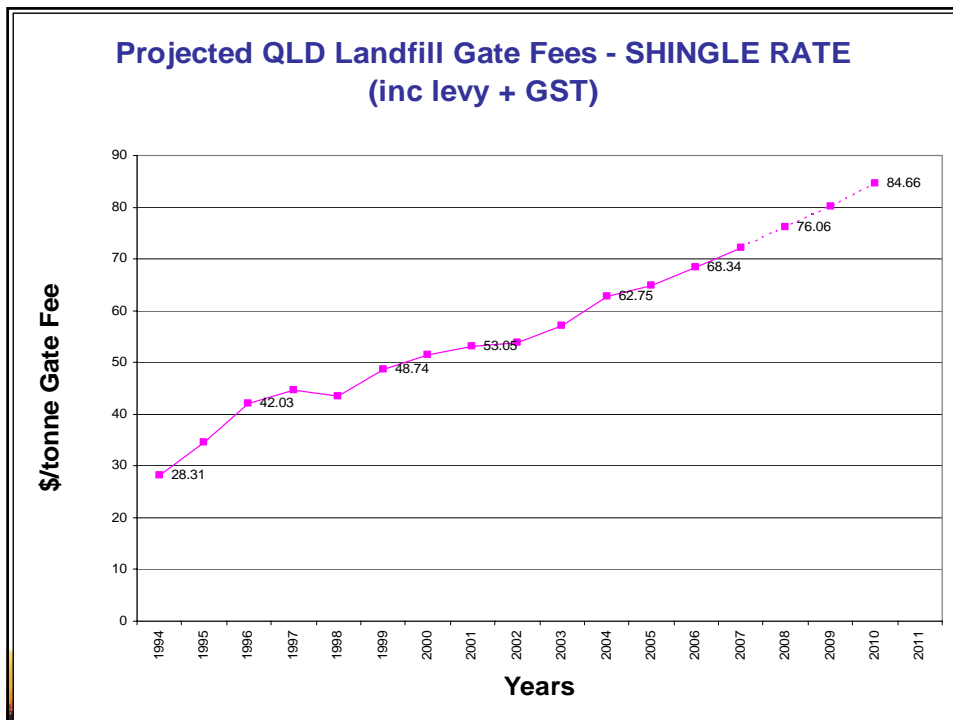
- July 06 = \$30/t
- +\$7 per year
- 1 July 2010 = \$58 / tonne



Total municipal waste in London



Policy for MSW	United Kingdom	Australia
Putrescible MSW to landfill	Mandated 2010 – 25% reduction 2013 – 50% reduction 2020 – 65% reduction	No mandated targets Voluntary targets: <ul style="list-style-type: none"> • NSW 2014 66% MSW • VIC 2013 65% MSW • WA 2020 100% • ACT 2010 100% • SA 2010 75% • NT no date 0% • QLD no date 0% • TAS no target
Landfill levy	\$A86/t	<ul style="list-style-type: none"> • NSW \$30 to \$58 in 2010 • VIC \$11/t • WA \$6/t • ACT \$80/t • SA \$20/t • NT \$0/t • QLD \$0/t • TAS \$0/t
LATS disposal penalty	\$500/t + tipping	Tipping: <ul style="list-style-type: none"> • NSW \$90/t • VIC \$40 • WA \$44 • ACT \$80 • SA \$65 • NT \$40 • QLD \$35 • TAS \$30
Recycling Targets	2006 – 23% 2010 – 30%	No regulated targets But recycling rates 40-72%

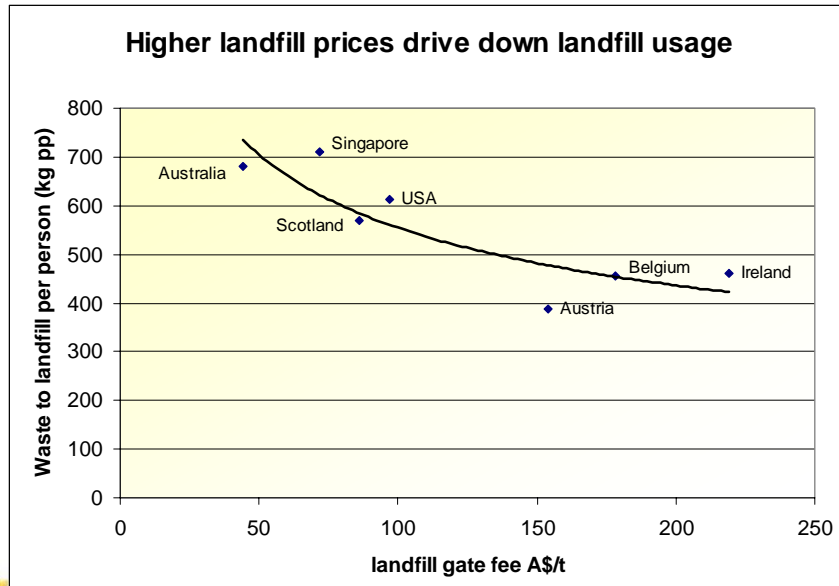


\$50 levy

- **C+I dirty MRF's become viable**
- **Some AWT's become viable**
- **Green waste recycling is viable**



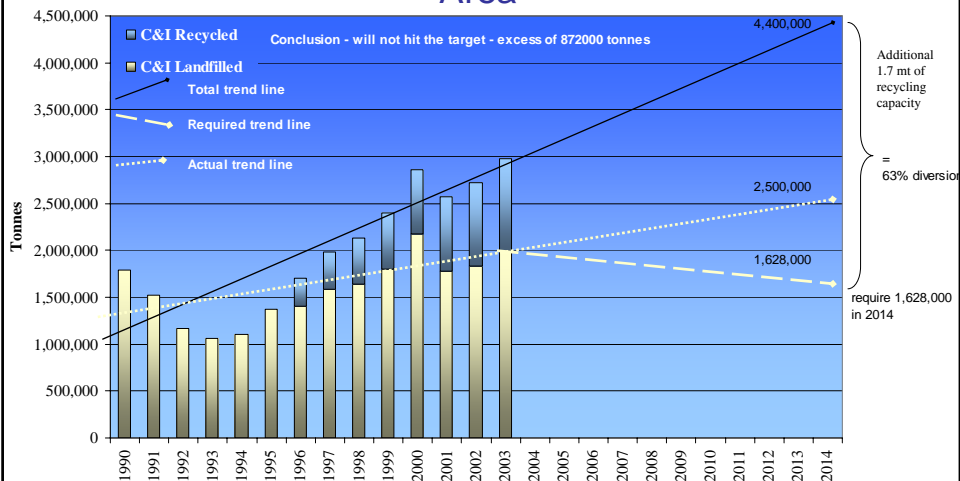
International Experience



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C&I landfill trend in the Sydney Metropolitan Area



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