



Pay By Weight

*An Information Reception and Seminar on Household
Rubbish Charging*

4 pm - 6 pm, 15th November 2006

Dining Room A, House of Commons

Variable charging (households being directly charged according to the amount of rubbish they put out for collection) has received growing public and political attention. Both central and local Government have shown increasing support for the issue while at the same time press reports have identified public concerns about 'spy in the bin' chips and double taxation.

The Associate Parliamentary Sustainable Waste Group, in association with the Chartered Institution of Wastes Management and PM Group plc, are hosting this reception and seminar to help bridge the knowledge gap and increase understanding about how pay by weight could affect household behaviour.

Pay by Weight:

An Information Reception and Seminar on Household Rubbish Charging,

Wednesday 15 November, 16.00-18.00

Dining Room A, House of Commons

4.00 pm	Coffee and Refreshments
4.30 pm	Introduction from chair: Dr Alan Whitehead MP <i>Co-chair, APSWG</i>
4.35 pm	Geoff Mountain <i>Chief Executive, PM Group plc</i> Geoff Mountain will provide details of the technology behind weighing waste, and outline how any difficulties, such as fly-tipping and waste transferral, can be overcome.
4.45 pm	Steve Lee <i>Chief Executive, Chartered Institution of Wastes Management</i> Steve Lee will be speaking on the wider benefits of pay-by-weight.
4.55 pm	Hugh McElvaney <i>Managing Director, McElvaney Waste and Recycling</i> Hugh McElvaney will outline his experience of the pay per-weight-system in Ireland.
5.05 pm	Cllr Mike Haines <i>Deputy chairman of the Local Government Association's Environment Board</i> Cllr Mike Haines will discuss the local issues surrounding pay-by-weight implementation.
5.15 pm	Questions from the floor
5.35 pm	Coffee and Refreshments



DIRECT CHARGING FOR RUBBISH ALLOWS PEOPLE TO SAVE MONEY

Total household waste is still rising while the percentage of recycled and composted household waste, although increasing slowly to 22.5%, compares with 65% in Holland and is amongst the lowest in the EU.

EU targets state that countries should aim to reduce the total biodegradable Municipal Solid Waste (MSW) sent to landfill to 50% of 1995 figures by 2013, and 35% by 2020. The latest NAO statistics indicate that these targets will not be met, and councils will be liable to fines of up to £150 for every tonne that exceeds these limits which could total £205 million by 2013.

Currently, the annual household bill for the collection of household waste, paid as part of Council Tax, is usually £60-£90. With landfill charges rising by £3 per tonne per annum and the likelihood of heavy fines being paid unless the amount of waste sent to landfill is reduced, charges for waste collection will increase, pushing up Council Tax.

For there to be any major improvement, a radical change of policy is needed to create an environment where people understand the personal implications of waste creation.

The option being canvassed of households paying directly according to the amount of rubbish they generate de-couples waste collection from Council Tax, removing this potential strain on it whilst providing an incentive to the public to alter behaviour, reduce waste put out for disposal and divert more of their rubbish for recycling.

Variable Charging Works – Widespread Evidence from Europe

- ❑ Experience from Belgium, Sweden, Holland, Germany, Ireland and the Isle of Man shows that charging based on the weight of waste collected has a dramatic effect - with the amount collected being reduced by up to 45% and recycling rates rising by up to 90%.
- ❑ Pay by weight schemes in EU countries have helped reduce the average amount of MSW waste to 150kg per inhabitant, which compares to the UK average of around 400kg.
- ❑ Variable charging leads to waste reduction all the way up the production chain. Consumers will not take kindly to unnecessary packaging if they have to pay to dispose of it. This will feed back to retailers and producers who will reduce waste to meet the changed demand.

Cost Savings for Public and Councils

- ❑ Direct charging for waste is not a 'double tax' on households; refuse collection can be taken out of the Council Tax.
- ❑ If nothing is done, people will end up paying through higher council taxes for the behaviour of others who take no action to minimise their non-recyclable rubbish.
- ❑ Shifting to a 'polluter pays' approach enables households to manage their own costs, and evidence from elsewhere in Europe shows that many will be able to save money.
- ❑ The incentives to recycle can be increased through charging lower rates for the disposal of recyclable waste or through a 'credit scheme' for the recycled amount.
- ❑ *Charge-by-weight schemes are not expensive for local authorities. Refuse collection and disposal savings outweigh the set-up costs which should be recouped within seven years.*

PM Onboard, part of the PM Group Plc, has established itself as the international market leader of on-board vehicle weighing systems and associated software for waste management –supplying systems to 30 local authorities in the UK, and 60 across Europe.

Use of Chips in Bins

- ❑ The most accurate and efficient method of direct charging is by weight of waste produced.
- ❑ This is measured through a chip fixed to a wheelie bin which identifies the bin owner and allows a record to be kept of the amount of waste they produce. Weighing the bin every time it is emptied enables the operators to charge them directly. It also builds up a record of a household's behaviour so that the Council can advise them on how they may reduce their waste and encourage them to recycle more and save money.
- ❑ Detailed analysis of the data collected can be utilised to plan more efficient collection routes, so reducing overall costs meaning lower charges for households.

Concerns About Fly Tipping and Waste Transference

- ❑ Many of the weighing schemes already in use reported an increase in **fly tipping** in the short-term, but after a year or less when the schemes were bedded down and individuals had become used to the options available to them, tipping normalised.
- ❑ There is the possibility that unscrupulous individuals may seek **to transfer their refuse to other households** in order to reduce or avoid payments. If complaints are made about waste transfer, long-term data capture through the weighing system can

analyse where transference is suspected and identify who might be responsible through looking at neighbouring households with frequent over-loaded bins. Bin locks could also be introduced.

- ❑ The largest financial impact of variable charging schemes may fall on those with a **low income and a high number of individuals** in their households. To address this, those affected could be offered adjustments in local taxes to compensate them, or, as with energy bills, the adjustments should be made through the social welfare system.
- ❑ **Multi occupancy units and community bins** can be dealt with through share initiatives, with charges calculated by weight and shared by various calculated methods between occupants. This method has already been established and is proven to work in other EU countries.

Public Opinion in Favour of Direct Charging

- ❑ According to a TNS poll for the LGA, 64% of people would prefer a system whereby you pay less tax and instead get charged directly for household rubbish removal, so that the more you recycle the less you would pay.
- ❑ Of those who agreed with variable charging in an Open University survey, 61% of people commented that they supported the measure because it would make people more responsible with their household waste.
- ❑ If introduced, the public needs to be made strongly aware of the environmental benefits of weighing waste, but also informed that, depending on their behaviour, the cost could be less to them, and then it is possible that a system could gain popular support.

Charging by weight cuts waste, increases recycling, saves money for the local authority and for householders who manage their waste responsibly.

If you would like more information on weighing waste, please contact:

Mark Bottomley, Marketing Director, PM Onboard Ltd, Airedale House, Canal Road, Bradford BD2 1AG		
Tel: 01274 771177	Fax: 01274 781178	e-mail: mark.bottomley@pmonboard.com
www.pmonboard.com		

OPTIONS FOR INCREASING HOUSEHOLDER RECYCLING**EDUCATIONAL CAMPAIGNS AT NATIONAL AND LOCAL LEVEL**

Government-sponsored, national educational and promotional campaigns have been reinforced at local level by the work of local authorities, retailers and others. These have proved effective but the question remains - what can be done in relation to the proportion of householders who are resistant to campaigns about recycling and don't participate or not as much as they could? This is particularly crucial because of the tough targets that the UK is facing to divert waste from landfill and also climate change issues which create a strong imperative for more waste prevention/re-use/recycling to reduce serious environmental impacts.

INCENTIVE SCHEMES

Local authorities are able to introduce incentive schemes on their own initiative and had backing from Government recently with Defra's recycling incentive pilots in which local authorities received funding to introduce/test specific approaches.

The sort of approaches tried were entry into prize draws with individual prizes such as cash, cars and holidays; vouchers to get into local attractions. For further pilot information, visit www.defra.gov.uk/environment/waste/localauth/encourage.htm

Incentive schemes have achieved some success but results may not be long lasting.

ALTERNATE WEEKLY COLLECTIONS

This is where different types of waste and recyclables are picked up once every two weeks rather than once a week.

This reduces the capacity for residual waste (ie non-recyclables) and so encourages householders to separate waste more carefully and therefore maximise recycling.

This approach is not a general attempt to reduce costs, because local authorities face greater waste costs anyway due to landfill tax, the requirements on them to divert waste from landfill and to treat/recycle much more waste.

The introduction of alternate weekly collections can be viewed negatively as a reduction of service. It must, therefore, be introduced in conjunction with opportunities for recycling and green waste collection.

CHARGING

Changing the way in which householders are charged for dealing with waste is not currently permissible under legislation. The type of options described here are, however, widely used in other countries.

Direct charging

The cost of dealing with householder waste could be separated out on the Council Tax bill. Householders would then see how much they are being charged currently and how

much specific actions, for example reduction in the amount of waste produced or the introduction of a new waste facility, are impacting on costs. This could even mean a reduction in the cost to householders in specific circumstances.

Variable charging

This is where the amount that householders pay is dependent on the amount/type of waste they are producing. This would typically involve a different charge for different types of waste ie more for residual waste than recyclables.

This could be done based on weight of waste being produced/volume/number of containers.

Or it could be threshold based ie cost to the householder will go up at particular threshold levels of waste being produced. Alternatively, this could be done as a discount ie below a certain level of waste being produced they receive a discount.

For such schemes to work, it has to be possible to identify how much waste is associated with a particular household, hence the use of a microchip or similar technology in a bin to identify it. This is all that the microchip can do ie it cannot analyse the contents of a bin.

Some local authorities have introduced bins incorporating microchips already in case a decision is taken to introduce variable charging at a later date. They have done this to avoid incurring the high costs of introducing the chips later which would involve new bins or adjusting existing bins.

Other uses for the microchips include identifying lost bins and being able to assess patterns in when bins are being put out, for example where a weekly collection is taking place, are they actually being put out each week? This can help to inform the development of future collection schemes.

Local authorities can also use the information to educate and inform those householders who continue to put all waste in the residual bin and fail to participate in recycling.

CIWM VIEWS

CIWM believes that all the above options should be available to individual local authorities but that it should be their choice, based on specific local needs and circumstances.

CIWM also believes it is very important to engage with the public at the right time; to explain clearly the particular challenges that are being faced, why particular approaches need to be considered or introduced and what they are expected to do; and provide any information that they may need to make the process easier for them.

Schemes being introduced also need to be able to accommodate larger households or those with specific special needs.

Further information about the Chartered Institution of Wastes Management is available at www.ciwm.co.uk or e-mail catherine.park@ciwm.co.uk

Mc Elvaney's Waste & Recycling Monaghan



Pay by Weight: Will it work?, The Irish Experience

Pay By Weight, *Will it work?*

Hugh Mc Elvaney
Mc Elvaney's Waste & Recycling



Why Does it work ??

- ✚ Mc Elvaney's waste & Recycling successfully weighs 7000 wheeled bins each & every week using PM On board Binweigh.
- ✚ At the end of each 6 month billing cycle these 7000 customers are billed on an individual basis based on the exact amount of refuse they produce.
- ✚ Company relying wholly on the information recorded by Weighing System.
- ✚ System in place from September 2002 & live from January 2003
- ✚ 7 successful billing cycles completed
- ✚ We're still in business !!



What else does PBW bring to the table?

- ✚ Advantages for Contractor
- ✚ Advantages for Customer



Advantages to Contractor

- ✦ More competitive – only heavy bins whose price is greater than the competitors will price the competition.
- ✦ Holds onto customer base:- due to lower price ie: customers paying only for what they dispose.
- ✦ Customer satisfaction when seeing a reduction or a saving in their bill.
- ✦ No different sizes in bins to be supplied – everybody gets a 240L.
- ✦ No problem with customers leaving extra bags at bins – just weigh them and get paid.
- ✦ Excellent monitoring of customers: every bin being chipped you can see when it was emptied and not paid. You can set the system not to lift unpaid bins, ie: watching every bin being collected is paid.
- ✦ Employees nixers – you are able to match weights of loads tipped to weight collected and see if employees are lifting waste not being paid for.



Advantages to Contractor Cont.

- ✦ Route Distributions – Settings & Improvements.
- ✦ Labour Distribution per truck – Rural or Urban collections.
- ✦ Easier management of finances and cash projections as the weight charge which is the biggest variable is kept separate for charging purposes.
- ✦ Control of waste collection operation.
- ✦ Raises barrier to entry to market: High capital investment involved to enter waste collection market.



Pay by Weight: Will it work?, The Irish Experience



Mc Elvaney's Waste & Recycling



Pay by Weight: Will it work?, The Irish Experience



Mc Elvaney's Waste & Recycling



Advantages to the Customer

- ✦ In control of amount they pay: You only pay for what you dispose
- ✦ Reduced bills : weigh less – pay less
- ✦ See benefit of recycling
- ✦ Can put their bin out as frequent or not as they like (not pay by volume)
- ✦ Encourages people to produce & dispose of less waste
- ✦ Encourages higher levels of recycling as proven by Repak in Ireland. Minister for environment announced that pay by use is the driving force behind Irelands increased recycling rates



Disadvantages to Customer

- ✦ Can penalise those who can least afford to pay i.e Large, Low income families.
- ✦ Have to be vigilant and prevent other people from putting waste in their bin
- ✦ Have to look elsewhere to dispose of grass and other heavy material, Civic Amenity Sites etc.



Disadvantages to the Contractor

- ✦ Cost of setup
 - A) upgrading trucks - lifting equipment
 - B) installing weighing systems
 - C) software
 - D) micro chipping bins and in some case buying new bins
- ✦ Extra maintenance of same
- ✦ Selling it to the customer: Disbelief that you can weigh the bin at all and secondly weigh it every week.
- ✦ Is the weighing equipment correct – compared to a set of Avery bathroom scales at €19.99 from B&Q.
- ✦ Training staff and temporary staff. Men on trucks and office staff.

Mc Elvaney's Waste & Recycling



Results of our system:

Amounts produced by Customer:

- ✦ Average 2002 – 1.3 Tonnes/Household/Year
- ✦ Average 2003 - .85 Tonnes/Household/Year
- ✦ Average 2004 - .74 Tonnes/Household/Year
- ✦ Average 2005 – 0.72 Tonnes/Household/Year

Recycling

- ✦ 240kgs /dry Recyclables ex. Glass /Household/Year
- ✦ 99% Participation
- ✦ No Added charge for Recyclables

Mc Elvaney's Waste & Recycling



Results of our system

Distribution of Amounts produced Annually

✦ 1-200kgs	= 8%	} 80%
✦ 201-400kgs	= 18%	
✦ 401-600kgs	= 20%	
✦ 601-800kgs	= 19%	
✦ 801-1000kgs	= 15%	
✦ 1001-1200kgs	= 9%	
✦ 1200-1400kgs	= 5%	
✦ 1400kgs +	= 6%	



Example: Prices Charged

2002

- ✦ Flat Price per bin type (120L, 140L, 240L)
- ✦ 240L bin - €264/year
- Landfill charges - €91/tonne

2006

- ✦ Service charge + weight charge in bands of 100kgs
- ✦ €190/year service
- ✦ €13.00/100kgs
- ✦ Average price (800kgs) + service charge = €294/year
- Landfill charges - €130/tonne



Pay by Weight: Will it work?, The Irish Experience

Results of our system

Mc Elvaney's Operations Report 03/10/2005 to 08/10/2005															
Date	Day	Vehicle	Collections	Total Weight	Allocated	Weight not allocated	Weightbridge /kg	Difference/ kg	Difference/ %	Hours collecting	Breaks/ hours	Breaks/ Breaks	Start Time	End Time	
03/10/2005	Monday	3258	559	17216	17216	0	14420	2796	19.4%	10.7	1.4	81 mins	06:50	16:30	
04/10/2005	Tuesday	3258	657	15039	15039	0	17680	-2521	-14.4%	10.0	2.6	158 mins	06:59	16:57	
05/10/2005	Wednesday	3258	799	20399	20399	0	22100	-1701	-7.7%	12.0	3.5	209 mins	06:33	17:31	
06/10/2005	Thursday	3258	336	10094	10094	0	10060	34	0.3%	10.1	2.9	176 mins	06:03	16:08	
07/10/2005	Friday	3258	262	9114	9114	0	9040	74	0.8%	6.8	1.1	66 mins	06:53	12:38	
Totals:			5	2513	71862	71862	0	73180	-1318	-1.8%	49.4	11.5			
03/10/2005	Monday	4207	471	13442	13442	0	13620	-78	-0.6%	11.3	2.3	136 mins	04:16	15:34	
04/10/2005	Tuesday	4207	507	15706	15706	0	15820	-114	-0.7%	11.7	2.1	127 mins	04:13	15:56	
05/10/2005	Wednesday	4207	408	12306	12306	0	12100	226	1.9%	11.4	1.6	95 mins	04:55	16:19	
06/10/2005	Thursday	4207	342	8790	8790	0	8880	-190	-2.1%	9.8	2.1	123 mins	05:10	15:00	
07/10/2005	Friday	4207	259	6950	6950	0	7040	-90	-1.3%	8.4	1.5	89 mins	04:51	13:15	
Totals:			5	1987	57214	57214	0	57460	-246	-0.4%	52.6	9.5			
03/10/2005	Monday	5774	308	9001	9001	0	8740	261	3.0%	10.8	1.2	69 mins	06:24	17:09	
04/10/2005	Tuesday	5774	277	7903	7903	0	7880	23	0.3%	9.9	0.3	16 mins	06:53	14:47	
05/10/2005	Wednesday	5774	321	9380	9380	0	9120	260	2.9%	9.8	0.2	11 mins	06:16	16:01	
06/10/2005	Thursday	5774	301	9308	9308	0	9300	8	0.1%	8.5	1.0	57 mins	05:42	14:12	
07/10/2005	Friday	5774	208	5724	5724	0	5620	104	1.9%	6.1	0.2	13 mins	06:14	12:17	
Totals:			5	1413	41316	41316	0	40660	656	1.6%	44.0	2.8			
03/10/2005	Monday	9659412	18	906	906	0		906	#DIV/0!	1.6	1.0	59 mins	10:12	11:49	
04/10/2005	Tuesday	9659412	1	31	31	0		31	#DIV/0!	0.0	0.0	0 mins	10:37	10:37	
05/10/2005	Wednesday	9659412	207	5082	5082	0	5740	-658	-11.5%	3.0	0.2	12 mins	09:46	12:46	
Totals:			3	226	6019	6019	0	5740	-279	-4.9%	4.6	1.2			
Overall Totals:				6,139	176,411	176,411	0	177,040	-629	0	158.6	25.8			

Mc Elvaney's Waste & Recycling



Pay by Weight: Will it work?, The Irish Experience

Conclusion

- Proven technology: Mc Elvaney's still in business after 3 years.
- Billing/ Company income totally reliant on information gathered by weighing system.
- Increased customer numbers.
- Total control of waste collection operation.

Mc Elvaney's Waste & Recycling



Job done!

Pay By Weight,

YES it works!

Hugh Mc Elvaney