GOOD PRACTICE
Limerick/Clare/Kerry Region
(now part of the larger Southern Region):
Household Pay-per-Weight Charging System
September 2014
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### 1. GENERAL INFORMATION ON THE GOOD PRACTICE (GP)

#### 1.1 General information

<table>
<thead>
<tr>
<th>Region</th>
<th>Limerick/Clare/Kerry Region (now part of the larger Southern Region)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Country</td>
<td>Ireland</td>
</tr>
<tr>
<td>Short name of the good practice</td>
<td>Household Pay-per-Weight Charging system</td>
</tr>
<tr>
<td>Geographical level of implementation (country, region, municipality...)</td>
<td>Country</td>
</tr>
<tr>
<td>Target group</td>
<td>Waste collectors &amp; producers of household waste</td>
</tr>
<tr>
<td>Date of implementation/duration</td>
<td>Since 2002 via the Waste Collection Permit Regulations</td>
</tr>
<tr>
<td>Waste stream (and subcategory)</td>
<td>Mixed municipal waste (EWC 20 01 03 - Residual)</td>
</tr>
<tr>
<td>Legal framework</td>
<td>Waste Management (Collection Permit) Regulations 2007 as amended</td>
</tr>
</tbody>
</table>
| Main local instruments involved | Technical – door-to-door collection; transfer station  
Economical – PAYT, fines for non-respect of the sorting guidelines.  
Communicative – non-addressed communication & addressed communication |
| Scale (pilot/partially roll out /roll out) | Roll-out |
| Initiator/coordinator | National |

#### Demography

| Population | 454,507 |
| Number of households | 171,476 (occupied) |
| Area (km²) | 10,700 |
| Population density (number of inhabitants/km²) | 42.5 |
1.2 Context

In 1998 the Irish Department of Environment, Community & Local Government (DoECLG) published the policy document ‘Changing Our Ways’. This document highlighted that the polluter pays principle was fundamental to efficient waste management.

Waste Management Plans (WMPs) were first prepared in Ireland in 2001, in accordance with the Waste Management Act 1996, and one of the statutory objectives of the WMPs was to ‘address the need to give effect to the polluter pays principle’. At the time of preparation of these plans Local Authorities, within Ireland, collected a significant portion of the household waste and waste charges often did not reflect the full economic costs of the waste management services provided.

In 2002 the DoECLG published the policy document ‘Delivering Changing: Preventing & Recycling Waste’. This document advocated the introduction of charging on the basis of weight/volume as an opportunity to reduce waste disposal costs through greater recycling rates. A target of three years was set for its introduction.

Initial permits issued to household collectors, in 2002, in the Limerick/Clare/Kerry Region required the phased implementation of a pay-by-use (PBU) charging system for collection of household waste. Since 2005 all household collectors have to provide a PBU charging system for collection of household waste. There are a myriad of different schemes on the market including pay by weight,
pay per lift, different bin sizes, tags and some schemes that adopt a combination of pay per lift, service charge and weight charge.

In 2012 the DoECLG published the policy document “A Resource Opportunity” an analysis of the regulation of household waste collection underpinning this policy identified a number of areas of poor or problematic performance in the current regulatory model, which render it incapable of meeting the government’s objectives. One of the areas identified was pricing issues, including pricing structures which do not incentivise sustainable behaviours.

1.3 Short description

A significant number of household collectors, both within this Region and nationally, have implemented a pay-per-weight charging system in order to comply with the PBU charging system required in their Waste Collection Permit (WCP). Under the pay-per-weight charging system the householder pays for the amount of waste they produce, the less waste they produce the less they pay. An electronic micro-chip is fixed to each wheelie bin which identifies the customer and allows the bins to be weighed on collection. The bins are weighed automatically by a weighing system on the collection vehicle. When the bin is lifted the system records the full weight and the empty bin weight when it is lowered. There is no manual calculation and customers are only charged for the net weight recorded.

1.4 Objective

The primary aim of the pay-per-weight household charging system is to prevent waste generation and increase the household recycling rates, thereby reducing the quantity of waste going to landfill and/or energy recovery.
The application of a pay per weight charging system, encourages householders to dispose of PRI items (especially WEEE which can be heavy) through the proper channels without charge rather than paying to have them disposed of inappropriately in their residual bin.

1.5 Method used to identify the good practice

Benchmark:
The 2008 OECD report “Ireland, Towards an Integrated Public Service, Public Management Reviews”, stated the following in relation to the charging system to householders for waste management in Ireland:

“With respect to the pricing of waste collection, Ireland’s extensive use of volume-based waste collection charges and the market pricing of services seems to have worked well once the principle of user charges was accepted. Ireland’s application of the “polluter-pays” principle would probably be a good model for other countries to follow. It has given Ireland a relatively high cost recovery rate for waste management services, and has probably been an added incentive for household recycling.”


- 46% of households used differential bin-based charges (flat fee),
- 34% used tag-based charges (either pay-by-lift / tags)
- 20% used weight based charges

The study concluded that weight-based charges are the single most effective PBU system in terms of waste prevention, waste recycling and diversion of waste from landfill. These charges prompted the highest per household recycling levels (between 27% and 32%), highest diversion rates from landfill (between 28% and 35%) and the lowest total kerbside waste figures (between 800kg and 947kg per annum). The study projected that if the estimated 80% of those households across Ireland currently on pay per lift / tags and differential bin systems switched to ‘per kg’ based PBU system, it could lead to an annual diversion from landfill of approximately 446,000 tonnes of domestic waste per annum.

1.6 External factors

None
2. IMPLEMENTATION

2.1 Preparation phase

Waste collection permits (WCPs) issued require authorised collectors to provide details within a specified time-frame of the WCP been issued of how they were going to implement the PBU charging system requirement. These details must be approved by the Region prior to the authorised collector commencing collection within the Region, thereby ensuring an effective roll-out of the PBU charging requirement. The WCP specify minimum criteria for approval of the PBU charging requirement:

“Household waste shall only be collected in accordance with a Pay by Use system from the date of grant of this permit. To comply with this requirement a Pay by Lift, Pay by Tag, Pay by Weight system is acceptable. Systems relying on a flat charge are not acceptable. The system shall provide a clear explanation of the calculation of the waste charge and shall provide an incentive for the customer to minimize residual waste. The permit holder shall forward a breakdown of the waste charge to the customer with the invoice or prior to renewal of contract and in any event at intervals not greater than six-month. This breakdown must identify in particular the proportional element of the charge and in cases where Pay by Weight is being used the weight per lift shall be included. In cases of Pay by Lift or Pay by Tag systems, the record of the number of lifts shall be included. All other charges should also be clearly identified on the invoice.”

2.2 Technical implementation

When a customer signs up with an authorised collectors who has a pay-by-weight charging system they inform the customer of how the charge is ascertained. For the first six months of the contract the customer is normally charged an average weight charge. For subsequent invoices the customer is charged based on residual weights disposed in the preceding six month period.

The method by which the actual charge to the customer is calculated varies between collectors and includes the following:

- A “banded” weight-based system using several weight ranges within which the annual weight of waste presented will fall within, with a different price applicable to each weight band
- An “average” weight-based system with 800 kg per annum being an atypical weight – if less than 800 kg is presented during the year, a credit is given for the following year’s bill; if more than 800 kg is presented during the year, the customer is billed for the additional weight.
- Price per kg of residual waste presented for collection, in addition to an annual flat service charge
- An annual service charge, per lift charge & per kg charge
Refer to examples of the above pay-by-weight charging schemes below.

<table>
<thead>
<tr>
<th>Band</th>
<th>Weight</th>
<th>Charges inc. VAT</th>
<th>Customers</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>Less than 400 kgs</td>
<td>€230</td>
<td>11%</td>
</tr>
<tr>
<td>B</td>
<td>400 kgs - 700 kgs</td>
<td>€285</td>
<td>80%</td>
</tr>
<tr>
<td>C</td>
<td>701 kgs - 1,000 kgs</td>
<td>€320</td>
<td>7%</td>
</tr>
<tr>
<td>D</td>
<td>1,000 kgs to 1,250 kgs</td>
<td>€360</td>
<td>2%</td>
</tr>
</tbody>
</table>


Source: [https://www.countryclean.ie/webclient/splashpage](https://www.countryclean.ie/webclient/splashpage)
AES, taking care of all your waste, for less.

For tidy savings and more ways to recycle, join the thousands of homes in Limerick who have already switched to AES.

Sign up to Value Plus now and pay as little as €24.00* per month

- We offer the widest range of bins (recycling, brown & glass), giving you more ways to recycle.
- The more you recycle, the less you have to put into your general bin.
- This means you won’t have to put out your general bin as much, allowing you to control your costs.
- Only AES Bord na Móna offer you TWO ways to manage your household waste

Value Plus

- For homes where fortnightly general waste collection is required
- Fortnightly general waste, recycling and organic bin collection
- Quarterly glass bin collection
- Up to 500kg general weight allowance (€2 surcharge per kg thereafter), unlimited recycling and organic waste
- Just €24.00 per month for Direct Debit payment. €25.00 for monthly bill pay.
- Rates fixed to end December 2013

Source: [http://www.aesirl.ie/limerick](http://www.aesirl.ie/limerick)

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Source: [http://pandawaste.ie/household/dun-laoghairerathdown/prices.html](http://pandawaste.ie/household/dun-laoghairerathdown/prices.html)

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2.3 Communicative implementation

The authorised collectors, in accordance with their waste collection permit conditions, continually provide information to householders’ customers on their pay-by-weight charging scheme via their 6-monthly invoices and their websites (see examples above).

Environmental Awareness Officers, based in each Local Authority area within the Region, continually provide information to the household sector i.e. members of the public, community groups, schools etc. through workshops, presentations, open days, site visits etc. where the message of cost saving by reducing the quantity of waste placed in the residual bin is highlighted.

2.4 Organisations involved

Department of Environment, Community & Local Government (DECLG) – responsibility for publication of strategy documents, circular documents to Local Authorities and preparing national legislation.

Three Waste Regions within Ireland - responsible for the preparation of the Waste Management Plans (WMP), which detail the framework for the implementation of relevant EU & national legislation, over a 6 year period. They also will have responsibility for publishing annual reports which will assess the implementation of the WMP.

Local Authorities – responsible for the implementation of waste collection permits and the objectives specified in the WMPs.

EPA – responsible for the publication of the National Waste Report which provides details of the annual waste quantities collected.

Private waste collectors – these are required to implement a PBU charging system for household customers, in accordance with the conditions of their Waste Collection Permit and national legislation.
2.5 Key success factors

Elements necessary:

- **Waste Collection Permits (WCP)** – in 2008 all WCP issuing authorities agreed to include the same conditions regarding the implementing a PBU charging system for household customers. This ensured that there was no competitive advantage for operators operating in areas with less onerous requirements.
- **Education and awareness** – at national & local level to ensure all relevant parties are aware of their requirements.
- **Enforcement** – evidence of enforcement is paramount to ensuring successful implementation.
- **Feedback** – collation and publication of relevant data in order to demonstrate the effectiveness of the measure.

2.6 Resources

As waste collection in Ireland is primarily undertaken by the private sector the implementation of the pay-by-weight charging system is primarily financed by the private sector. The initial investment cost is significant as collectors have to install and maintain a weighing system on all collection vehicles.

Despite the investment and running cost associated with implementing the pay-by-weight charging system collectors will be in a position to recoup the actual cost of disposing residual waste from the producer of the waste. A regulatory impact assessment undertaken by the DoECLG recognised the cost to industry in moving over to a pay by weight system, but, on the basis of the findings of the STRIVE research Study, asserted that “A transition to weight based charging on a national basis could be achieved relatively cheaply, in view of the potential benefits.”

The exact investment costs, running costs and savings are not available as this information is commercially sensitive.

3. RESULTS

3.1 Monitoring of the progress of the GP

All private waste collectors in Ireland must have a Waste Collection Permit (WCP). The WCP requires collectors to provide details of the quantity of waste collected on an annual basis. The details required include Local Authority Area where the waste was collected, the number of householders served, the waste type (EWC Code), the waste quantity and the disposal/recovery location (refer to screenshots
Therefore details of the quantity of household waste collected/household/year can be ascertained from collectors which operate different charging schemes.
Regional Data:

Table 1 below shows the average quantity of household waste collected/household/year for authorised collectors operating within this Region, based on their WCP 2013 annual environmental report.

The collectors highlighted in blue (companies A & B) operator a pay-per-weight charging mechanism while the others (companies C, D & E) operate an alternative pay-per-use charging mechanism.

Table 1: The 2013 average quantity of household waste collected per household per year

<table>
<thead>
<tr>
<th>2013 Household Waste Collected Data</th>
<th>Company A</th>
<th>Company B</th>
<th>Company C</th>
<th>Company D</th>
<th>Company E</th>
</tr>
</thead>
<tbody>
<tr>
<td>Residual waste/household/yr</td>
<td>0.42</td>
<td>0.52</td>
<td>0.74</td>
<td>0.65</td>
<td>0.69</td>
</tr>
<tr>
<td>MDR/household/yr</td>
<td>0.22</td>
<td>0.27</td>
<td>0.22</td>
<td>0.18</td>
<td>0.27</td>
</tr>
<tr>
<td>Segregated organic &amp; glass/household/yr</td>
<td>0.10</td>
<td>0.03</td>
<td>0.04</td>
<td>0.00</td>
<td>0.04</td>
</tr>
<tr>
<td>Total waste/household/yr</td>
<td>0.74</td>
<td>0.82</td>
<td>1.00</td>
<td>0.83</td>
<td>1.00</td>
</tr>
</tbody>
</table>

The above Table illustrates that customers signed up to a collection service provider operating a pay-per-weight charging system produce a lower quantity of household waste, in particular residual waste.

National Data:
Data from the 2011 EPA STRIVE study “Study of Pay-by-use Systems for Maximising Waste Reduction Behaviour in Ireland” clearly indicates that a ‘pay per weight (per kg)’ form of weight-based-charging is the most effective pricing system in terms of influencing household behaviour under all indicators, as illustrated in Table 2 below.

Table 2: Household Waste Indicators based on different charging systems.

<table>
<thead>
<tr>
<th>System</th>
<th>Percentage residual waste</th>
<th>Percentage recycling</th>
<th>Total waste per household (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Per kilogramme weight based</td>
<td>65</td>
<td>32</td>
<td>800</td>
</tr>
<tr>
<td>All weight based</td>
<td>72</td>
<td>27</td>
<td>947</td>
</tr>
<tr>
<td>Tag based (i.e. Tag or per Lift)</td>
<td>79</td>
<td>20</td>
<td>928</td>
</tr>
<tr>
<td>Differential (i.e. bin size)</td>
<td>79</td>
<td>21</td>
<td>1,294</td>
</tr>
</tbody>
</table>

The STRIVE study also found that applying a per kilogram pay by weight charging system for organic bins encourages a more frequent collection of such material and thus ensures a reduction in potential odour nuisance and a better quality product to the end processor.

3.2 Other results

In the 4th quarter of 2013 this Region requested written submissions from members of the public and all stakeholders, in relation to the preparation of the new Waste Management Plan for the Region. A number of the submissions received highlighted the need for a pay-by-weight system as the most effective option to incentivize waste reduction.

Earlier this year the DoECLG invited comments from interested parties on their consultation document regarding the Regulation of Household Waste Collection. This document posed a number of questions in relation to the regulation of household waste collection. In relation to pay-per-weight the following questions were asked:

- Given the overwhelming arguments in favour of the per kilogram weight form of pay-by-use, on what basis should it be introduced and what are the appropriate transitional arrangements?
- Should a ‘pay per weight (per kg)’ charging system be mandatory for household waste collection, how can the balance between the variable cost ‘pay per weight (per kg)’ element of the charge and the fixed cost (standing charge) element of the charge be best achieved?
Following on from this consultation document the DoECLG have recently indicated that they hope to publish the Environment Miscellaneous Provisions Bill during the 2013 Government spring/summer session. It is intended that the Bill will contain a number of amendments to the Waste Management Acts 1996 – 2013. Among the waste related measures proposed for inclusion in the Bill is the introduction of a mandatory price per weight charging system for household waste collection.

4. LESSONS LEARNED

4.1 Negative effects

- The negative effect of direct charging to the householder is that many householders see an opportunity to avoid paying for their waste management and illegally dispose of their waste rather than pay for its collection and treatment.
- Household customers who sign up to a collector operating a pay-per-weight system will often switch collectors if they are producing high quantities of waste and want to avoid high charges rather than implementing waste prevention and/or recycling measures.
- Household collectors who operate a pay-per-weight system can implement the system in a number of different ways (refer 2.2) therefore making it difficult for customers to easily compare charges between collectors.
- Implementing a pay-per-system for smaller household collectors maybe too onerous due to the significant investment cost incurred in installing and maintaining the weighing system on collection vehicles.

4.2 Challenges

There is no doubt that a ‘pay per weight’ system, properly implemented is likely to be the most effective tool in waste prevention and increased recycling, however it’s proper implementation can be problematic. Past experience, within the Region, has shown collectors setting a fixed charge (standing charge) which allows the householder to dispose of a significantly high quantity of residual waste prior to being charged a nominal price per kg for residual waste disposed above the limit set within the standing charge – although this practice meets the ‘pay per weight’ requirement it is in effect a ‘flat charge’.

A level playing field for all authorised household collectors is paramount therefore the exact type(s) of permitted pay-per-weight system(s) needs to be clearly legislated. It is also paramount that any pricing structure is transparent for the householders and comparisons between service providers are easy.
5. PICTURES AND OTHER DOCUMENTATION

6. FURTHER INFORMATION

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Southern Regional Waste Management Office</th>
</tr>
</thead>
<tbody>
<tr>
<td>Address</td>
<td>Lissanalta House,</td>
</tr>
<tr>
<td></td>
<td>Dooradoyle,</td>
</tr>
<tr>
<td></td>
<td>County Limerick</td>
</tr>
<tr>
<td></td>
<td>IRELAND</td>
</tr>
<tr>
<td>Contact person</td>
<td>Philippa King/Carol Sweetnam</td>
</tr>
<tr>
<td>Phone</td>
<td>00353 61 496842/00353 61 496841</td>
</tr>
<tr>
<td>E-mail address</td>
<td><a href="mailto:philippa.king@limerick.ie">philippa.king@limerick.ie</a>/csweetnam@limerickcoco.ie</td>
</tr>
<tr>
<td>Website</td>
<td><a href="http://www.managewaste.ie">www.managewaste.ie</a></td>
</tr>
<tr>
<td>Others</td>
<td></td>
</tr>
</tbody>
</table>