Waste Cost: The Implementation Of The "Polluter Pays" Policy in Ireland

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Abstract

This paper explores the on-going controversy surrounding the management of municipal waste in Ireland by focusing on cost. Utilising two theories of the environment, that of ecological modernisation and reflexive modernisation, the economic instrument of Polluter Pays is analysed through the interplay between two central sets of actors. The viability of options as a result of Polluter Pays puts opportunities for profit into the hands of private waste operators who work to the capitalist ethic of rational calculation. Local Authorities in Ireland are also waste service providers who, like the private sector, seek to maximise return on investment.

However at the same time Local Authorities work to a different ethic as they are obliged in law to follow the Irish government's waste management policy by implementing the Hierarchy of Options strategy which, for example, preferences re-cycling over landfill and incineration. Polluter Pays is operationalised through funding this strategy from the individual household as producer of municipal waste. This paper asks if Polluter Pays facilitates or impedes the overall goal of environmental protection as this strategy puts cost restraints on Local Authorities which do not apply to the private sector.

Keywords*: waste, cost, profit, policy, environment, modernisation*

1 Introduction: the notion of waste cost

In recent decades much has been written about how our exploitation of nature has led to present-day environmental degradation. At its core environmental degradation examines the relationship between the social, economic and political processes of production, and those which relate to the natural ecosystem. Murphy (1994) argues that Marx is a good starting point for an analysis of this relationship. In capitalist production, raw materials are bought, transformed into commodities and exchanged on the market for profit. This profit, or surplus value, can be consumed or reinvested by its owners. If reinvested, it provides the basis for the further accumulation of profit or the accumulation of monetary capital.

However the missing link in this formula of raw materials, commodities, and profit is *waste*. The production of commodities always involves the production of waste. The crucial difference between the production of commodities and the production of waste is that unlike the former, the production of waste has historically occurred at relatively little cost to the producer. Waste is produced in production and consumption practices; if the cost inherent in the waste produced in these processes is not paid or is under-paid it means enhanced surplus value and profit to producers. The accumulation of surplus value has been partly based on the accumulation of surplus waste. Therefore

- in addition to having an exchange value and a use value, a
- commodity also has what could be called a waste cost. This refers
- to the cost of purifying production waste or the commodity itself
- during or after use so as to render it benign to the environment,
- of renewing the environmental resources used, of recycling the
- commodity or its components, and of other means to bring the
- environment back to the state it was in before the commodity
- was produced. (Murphy, 1994: 111)

For producers of commodities profit is directly linked to the capacity to keep costs down. In addition to keeping labour costs down (and the selling price up), costs are incurred in the procurement and use of raw materials and, to a lesser extent, in the disposal of waste. Waste cost accounting procedures, the inclusion of the cost of preventing or limiting environmental degradation, have not yet been properly developed. As a consequence it is difficult to quantify the "unpaid waste cost" (Murphy, 1994) involved in processes of production and consumption. The waste cost of a commodity is the cost of reversing degradation. If the waste cost is too high, if the production of a commodity is so harmful to the environment that the cost of producing it will adversely affect its selling price, then it will be produced only if its waste cost goes unpaid.

This brief account of waste cost introduces the subject matter of this paper. Polluter Pays endorses the policy principle that those who produce waste should pay for it. Environmental policy on waste in Ireland includes the use of this economic instrument, policy which reflects decision-making at trans-national and international levels. The driving force for action on the environment is the 1992 Rio Earth Summit, the main endeavor of which is Agenda 21, a programme of action towards sustainability in the 21st century. Progress towards implementing Agenda 21 is monitored within the European Union by the Commission on Sustainable Development, which comprises government representatives from member states. Emphasis is placed on national governments developing their own strategies of implementation supplemented by international efforts at co-operation (Doyle, 2003: 373). This paper focuses on one aspect of these strategies of implementation (Polluter Pays) and is informed by two sociological theories of environmental degradation which I briefly explain below.

The first sociological perspective of environmental degradation is the theory of ecological modernisation which aims to analyse how societies deal with environmental

crisis and how environmental reforms are instigated. These reforms are focused on safeguarding the sustenance base of society; therefore as a theory it is intimately connected to the notion of sustainability (Weale, 1992; Mol, 1995; Hajer, 2005). The term ecological modernisation refers to an ecological switch of the industrialisation process in a direction that takes into account the maintenance of the existing sustenance base.

Baker (1997) argues that ecological modernisation is one road to operationalising the notion of sustainable development within the European Union, and the Action Programmes are the means for translating European Union commitments on the environment into policy. The implicit belief of ecological modernisation is that if policies do not take into account environmental degradation on cost grounds, then these costs do not disappear, but are displaced "across space and time". Future economic competitiveness is linked to controlling pollution and is strengthened by a commitment to producing environmentally safer commodities and production processes. According to Baker (1997) the Fourth Environmental Action Programme (1986) was the start of the adoption of ecological modernisation as an ideology within the European Union. The importance of this

- lies in the fact that it allows the Union to justify its
- simultaneous pursuit of a rigorous programme of economic
- growth based on the completion of the internal market and
- of an ever-expanding environmental protection policy. (Baker, 1997: 96)

The second perspective is that of reflexive modernisation, an over-arching theory of social change which includes an environmental analysis. Reflexive modernisation does not deal with sustainability directly, but rather looks to societal processes over the longer term and questions how these contribute to present-day environmental decay (Beck, 1992). Fundamentally, the theory argues that the antithesis between society and nature which prevailed in the nineteenth century industrial society

- proceeds from "nature" as integrated by culture, and the
- metamorphosis of injuries to it is traced through the social
- subsystems. (Beck, 1992: 81)

Beck speaks of a three-stage periodisation of social change; pre-modernity, simple modernity and finally reflexive modernity. Simple modernity is on a par with industrial society and the new reflexive modernity is on a par with what Beck calls "risk society". The notion of risk society refers to the range and depth of environmental hazards societies face as a result of exponential growth. The cause of environmental degradation springs from 19th century industrial society and the emerging institutions of industry, science and government. Essentially the notion of reflexivity involves the self-confrontation with the negative consequences of the *success* of modernity.

The economic policy instrument of Polluter Pays in Ireland is examined bearing in mind these two perspectives, which I comment on at the end of the paper. Municipal waste that is directed to landfill or incineration must be managed safely and safety comes at a cost. At the same time waste originates from industry which raises the question of waste cost (Murphy, 1994). The principle policy imperative on waste in Ireland is the European

Economic Community (EEC) Act of 1972 which laid the foundation for the transposition of environmental policy into the domestic law of individual member states. Acts take the form of Directives, and Council Directive 75/442/EEC (1975), together with a 1991 amendment, exemplify what Baker (1997) calls the "operationalising" of ecological modernisation within the European Union. These Directives form the initial policy framework within which the regulation of municipal waste takes place in Ireland. In particular the 1975 Directive states that member countries must encourage the miminisation of waste, and must dispose of waste without endangering human health, water, soil, or animals. Article 11 gives effect to the Polluter Pays principle.

This Directive is set against the over-arching principle of the "Hierarchy of Options" which frames European Union policy on municipal waste. The Hierarchy of Options directs waste into streams ranging from the high end of preference (reuse, recycle) to the least preferable (incineration, landfill). The higher up the Hierarchy, the more environmentally friendly, and visa versa. This policy is enshrined in the 1996 Waste Management Act (WMA) introduced by the Irish government. This Act also gives effect to the economic instrument of Polluter Pays. The purpose of the 1996 WMA was to regulate both hazardous and non-hazardous waste and to promote the Hierachy of Options. Whereas the regulation of hazardous waste was to come under the ambit of the EPA, responsibility for the management of municipal waste was to fall to Irish Local Authorities.

2 Polluter Pays policy in Ireland

Ireland has had to respond to the challenge of European Union regulations on waste. The possibility of ignoring or delaying the implementation of policy imperatives created at the trans-national level is not an option (Fagan, 2001; Murphy, 2005; Leonard, 2005). Exploring waste management in Ireland from the policy point of view is predicated on its obligations as a European Union member. Connaughton *et al* (2008: 146) comment that the implementation of environmental policy in Ireland reflects the Irish government's view of environmental issues as being "potentially costly and as inhibiting economic competitiveness". Waste management policy illustrates the "quandary" between economic competitiveness and sustainability. According to the authors the way sustainable development is contextualised in terms of waste policy is reflective of "a blurred acceptance of ecological modernisation, rather than a strong ideological and practical commitment to sustainable development" (ibid: 148). The waste issue sets new targets for public administration; in particular it illustrates the introduction of new environmental policy instruments (NEPIs) such as Polluter Pays. This indicates a move towards market based and "cooperative" instruments and away from the traditional centralist style of regulation.

The model of social partnership has been adopted as a cornerstone of policy by successive Irish governments since the late nineteen eighties (Connaughton *et al* 2008). The social partnership agreement approach to policy is made up mainly of government, business and the trade union movement. With regard to the environment the rationale of social partnership is that it requires various actors with skills to solve complex modern problems and to effectively apply the use of economic instruments. The concept of Public Private Partnerships (PPP) emphasises "mixing" the public-private sector and attracting

investment. An example of this approach is the National Development Plan 2000-2006 where a key element is the delivery of projects through PPP's which combine public-private sector expertise and investment. Connaughton *et al* note that PPP arrangements have "proven more problematic than anticipated" (2008: 150).

The 1996 WMA devolves powers to Local Authorities to prepare and implement plans for municipal waste, making them a key institutional actor in the Irish government's waste management strategy. As such Local Authorities are the carriers or principle actors in implementing the policy of Polluter Pays within the context of the Hierarchy of Options. My intention in this paper is to explore how Irish Local Authorities have responded to this policy by giving an overview of its implementation; followed by a focus on one specific jurisdiction, the Dublin metropolitan area. The reason for this focus is that currently there is much controversy over the proposed development of a municipal waste incineration plant capable of receiving 600,000 tons of waste annually at a site called Poolbeg, situated in Dublin Bay. The hotly debated topic of Poolbeg (a Public Private Partnership development) raises the central issue of waste and cost partly because it focuses on whether such a facility actively reflects (or otherwise) the principle behind Polluter Pays. As an extension Poolbeg also raises questions in terms of the Hierarchy of Options as to whether or not its overall goal of environmental protection is being achieved.

The economic instrument of Polluter Pays involves the production of waste, its cost, and the issue of who pays for it. The cost(s) of waste both enable and constrain actors with regard to operating the different streams of waste. The waste stream dominates the controversy over Poolbeg because it centres on who controls which stream. From a policy point of view Poolbeg is a good example of how the costs of managing and regulating waste influence the goal of environmental protection. Waste is regulated in law and must be managed so as to minimise damage to the environment and human health, all of which comes at a cost. On the one hand, the viability of options and opportunity for profit in the waste business occurs within the context of environmental protection. On the other, cost factors affect the ability of Local Authorities to carry out their statutory duties in relation to waste management.

3 Local Authorities as institutional actors in waste management

The context of waste and cost in relation to Local Authorities is the changed relationship between public and private waste management services and infrastructure in Ireland. Up to approximately thirty years ago municipal waste in Ireland was collected solely by Local Authorities with no private sector involvement. Under the 1996 WMA Local Authorities must either provide, or issue permits for the private sector to provide waste infrastructure. The potential entry of private waste operators in the waste market reflects policy preference at national level. Currently in Ireland Local Authorities have only three sources of income: the Exchequer, the ratepayer, and charges. The costs incurred by Local Authorities for waste infrastructure and services must come from charges; they are also responsible for implementing the Hierarchy of Options.

The 1996 WMA implements Polluter Pays which is targeted at the individual household. Up to this time domestic waste collections were funded mostly through rates,

and partially through the Exchequer. The polluter is now the individual household; individuals become responsible in law to pay for the waste they discharge. Payment for household waste is independent of who collects it, although the cost of the service may vary depending on who provides it, and the type of billing system that is used. Waste service providers now charge the individual household for waste; therefore cost becomes a central issue in the Poolbeg controversy.

As stated above, Local Authorities in Ireland carry out their statutory responsibilities by either providing a waste service, or ensuring that a waste service is in existence in their respective jurisdictions. This is done either by controlling the waste streams themselves in part, or by controlling the permit system for private companies to operate the different streams. This permit system is the contract given by Local Authorities to carry out waste activities, and contains the conditions under which the company must operate. In Ireland the private sector plays a role in the management of domestic waste in three different ways. The first is where Local Authorities, particularly in rural areas, simply abandoned the collection of waste and left it entirely to the private sector. This means that the Local Authority oversees the provision of a service, but does not provide one itself.

The second form of involvement of the private sector is by tendering. This refers to the competitive tendering process that companies go through in order to provide a waste collection service, over a given period, to collect one or more of the different streams of waste. The third form of involvement is where a Local Authority, or a group of Local Authorities carries out a collection and disposal service using contract labour, but with some degree of tendering to the private sector. The four Dublin Local Authorities (Dublin City Council, South Dublin Council, Dun Laoghaire Rathdown County Council and Fingal County Council) which are the subject of this paper come under this category, where they grouped together to promote their own waste management plan which includes incineration at the proposed Poolbeg site.

Waste goes into the waste stream; however public and private waste service providers operate to different constraints. A private contractor is not obliged to divert waste away from landfill; although other costs such as landfill charges and licensing fees apply. Local Authorities, on the other hand are obliged to divert waste away from landfill within the policy parameter of the Hierarchy of Options. Thus, cost for Local Authorities as opposed to the private sector carries several different meanings. One is the economic cost of the service itself, including collection, re-cycling and disposal costs. It also refers to the provision of waste facilities and infrastructure. A second meaning of cost refers to the social responsibilities that Local Authorities must carry in terms of their statutory duties with regard to the collection of waste. This includes equity under the Polluter Pays principle, meaning the customer pays according to the amount of waste they produce. “Cost” also means carrying the cost burden for those who do not pay. This situation puts constraints on the ability of Local Authorities to act, causing a dilemma that does not apply to private operators.

3.1 Local Authorities’ Dilemma

A brief summary of pricing systems for waste is given here in order to place this dilemma in context. The pricing systems in place for the collection and disposal of domestic waste

in Ireland are complex, varied, and still evolving. One Local Authority official explained how a pricing system might operate for a private company. The pricing system depends on whether the waste company owns a facility or not. If the company owns a facility such as a landfill, they would have one pricing system for their general customers and another for themselves

- in the sense that there is a cost to providing landfill, to
- landfill space. If they develop the landfill you could
- write that off as xeuro per ton. But they may charge an extra
- 50 euro per ton for a private, a private customer. [1]

The same applies for incineration. The company would have a pricing system which would depend on the size of the load; that is if it was a single load, or if it involved a contract that was put in place for a period of time for x tons of waste. In this case there would be a completely different pricing system. The pricing system that Local Authorities operate varies. For example in the Dublin metropolitan area (the focus of this paper) two Local Authorities have a "tag a bag" system for domestic waste. Another has a standing charge and a lift charge system, and the fourth has a complex system of a standing charge, a lift charge and a weight charge. The pricing system that private operators use reflects the profit motive. This means that price determination is built into the structure of highest returns for capital investment. However the pricing systems used by Local Authorities reflect very different objectives. Local Authorities seek to reduce cost, but do not operate by the principle of profit maximisation to meet shareholder expectations. In addition, Local Authorities must reach targets for diversion away from landfill (residual waste) which is linked in complex ways to how waste is priced. Another Local Authority official explains that

- if you're charging for waste you're going to have re-cyclicable
- waste, organic waste, and residual waste, so how do you price
- that? Clearly, it's most expensive, the residual waste, so the cost
- per kilo of residual waste is going to have to be higher. [2]

The private sector does not have this constraint; a company may or may not be interested in re-cycling depending on their business strategy and investment priorities. The private sector enters the market because of the opportunity for profit arising from the Polluter Pays principle. The reason is that under Polluter Pays waste becomes a commodity; a fundamental point which I return to below. Local Authorities, on the other hand, implement the Polluter Pays strategy which is dictated by policy, not profit. Setting the price for waste collection, therefore, using standing charges, lift charges etc. must reflect the new reality of Polluter Pays. This means that it must strive to be equitable in terms of reflecting payment for waste as regards the amount of waste a householder produces. Because Local Authorities operate to the Waste Management Plan, they must ensure equity of cost for the service they provide. In practice this means that the billing system must be equitable in terms of Polluter Pays.

However the technology required applying weighing gear to trucks and computers to record the weight means the application of a much more expensive system to record the waste each householder discharges. In other words, the new pay-by-weight system results in adding huge costs for the Local Authority which significantly increases overall costs. This results in a system that is equitable, but costly. These costs impose a burden in terms of income that could be used for developing other streams for waste such as dry re-cyclables' facilities and facilities for composting food and garden waste. Local Authorities receive some income from gate fees at Civic Amenity Centres; in addition to income from the sale of re-cycled glass. However most income Local Authorities receive derives from charging for domestic collections. But this does not cover the costs of the Local Authority. Re-cycling is costly, for example there is a collection charge and a disposal charge. The over-arching principle is Polluter Pays. Essentially the income from household waste charges must pay for everything. For the private sector, the cost of waste infrastructure is built into price determination. The situation for Local Authorities, however, becomes a delicate balancing act between environmentally acceptable practices on the one hand, and socially affordable cost for householders on the other.

A further constraint Local Authorities have that does not concern private waste operators is what is called "country responsibilities". This refers to the fact that Local Authorities have "waiverers" in their areas. Waiverers are low income householders who have been given an exemption by the Local Authority. This means less income for Local Authorities because although they receive no income from these households, they must collect the waste left out. In addition, other householders are non-payers, either because they may have political objections to the principle of Polluter Pays, or decide for other reasons not to use waste service providers. In effect this means that non-payers get a free service which the Local Authority subsidises. They are a cost to the Local Authority, who is responsible in law to ensure a waste management service exists in its jurisdiction. Both sets of customer cause a loss of revenue for a Local Authority, whether by exemption, political principle or through the "free-rider" (Olson; 1965) rational choice of individual decision-making. Either way the cost-effect is the same for the Local Authority, an effect that does not apply to private waste companies. If a private company is not paid for their service waste is not collected. The knock-on environmental consequence is that the loss of income affects the provision of services such as re-cycling infrastructure which Local Authorities are responsible for under the Hierarchy of Options policy.

3.2 Effect of Polluter Pays Policy

The Polluter Pays policy changes the game, so to speak whereby there is now opportunity for the private sector to invest in waste management provision, including landfill and incineration. The provision of landfill and especially incineration infrastructure carries huge capital costs. Equally, the opportunity for profit is huge. Landfill produces income from gate charges in addition to energy (methane gas) produced from the engineering process which can be sold on. Incineration by definition is waste-to-energy; in addition to gate charges the energy produced can be and is also sold on; however the return on investment for incineration is approximately 100% higher than for landfill. This infrastructure is part of the government's waste management policy. The Irish state encourages the private sector to enter the waste market. The policy document *Changing*

Our Ways urges "utilising the potential of the private sector to contribute in the delivery of public services" (*Changing Our Ways,* 1998: 7).

Important reasons for private sector involvement in waste management infrastructure include factors such as price competition, investment requirements (PPP), and the regulator v operator relationship. As for price competition, waste is a commodity and its price must include provision for profit; the lower the price the more customers one gains. Secondly, infrastructure such as landfill and incineration require high capital investment, which carries the long-term business goal of capital return on such expenditure. Finally, the "regulator v operator" factor relates to the separation of the regulatory agency from the commercial operator. Here the operator seeks to ensure that the goals of the business are not negatively impacted by (over) regulation.

These factors play a key role in determining where waste goes. Where waste goes in the system depends on the decision of those who own it. This focuses on the issue of who controls the waste stream. Control of the waste stream in effect means ownership of waste. The ability of the private sector to make rational business decisions affects Local Authorities' capacity to provide services under the Hierarchy of Options policy. It affects the Authorities' ability to provide infrastructure. In turn the ability of the private sector to act only from a business ethos and without any social obligations has a knock on affect on Local Authorities. The public sector must take account of the social side of waste management. This in turn directly relates to cost.

The issue of who controls the waste stream emerges as a dilemma for Local Authorities in terms of overall environmental goal-setting. A Local Authority official explained this dilemma in relation to landfill. From domestic waste there is a residual fraction that must go to landfill. Both Local Authorities and the private sector have the ability to build and operate such a facility in accordance with licensing requirements. However the private sector

- are able to make decisions, they're able to move faster,
- they're not tied by different other restrictions that Local
- Authorities in local government have. They can make a
- business decision and run with it…whereas a Local Authority
- is restricted…in terms of the consultation process, they're
- answerable to the public in far greater ways than the private
- operator. So they can make decisions faster, they can react to
- commercial realities faster. [2]

Local Authorities are governed by the fact that they are in the business of providing a waste service in competition with private contractors, and cannot compete fairly. A Local Authority cannot use the income it receives in parking levies or rates to subsidise a waste service that is not breaking even from a cost point of view. A private operator can do this by subsidising domestic collection from another area such as commercial collection in order to undermine a Local Authority and squeeze them out. Private waste companies

poach customers from Local Authority areas by offering a waste collection service at a cheaper rate than the Local Authority. An example of this practice involves one of the four Dublin Authorities, where a private waste company began operating in late 2006. Of approximately 67,000 households within the jurisdiction, this operator poached about 4,000 customers between November 2006 and April 2007.

The problem for the Local Authority is, for instance, who pays for the Bring Banks? The operator has its own landfill and is not interested in re-cycling. The rationale for poaching arises from Polluter Pays; introducing charges for waste collection means that private operators will seek to enter the market if they can. Private contractors poach customers from those Local Authorities who provide a waste collection service from which they try to make a profit. In effect the Local Authority, which is an administrative arm of the state, becomes part of the free market and must compete with companies who are now able and willing to manage waste.

Local Authorities' ability to act is compromised by the entry of the private sector into the waste business. In a free market individuals have choice of service, and this choice is utilised by private industry in order to gain (poach) customers. In order for a private operator to be cost effective in the area of domestic waste collection, the operator has to have density of population. The strategy for a private company is to be the only competitor ("absolute collector") in an area in order to maximise profits. To do this the company has to convert those who are availing of the services of others, and this is done either by giving a combined waste service, or a waste service that is cheaper. A private company can provide a cheaper service by subventing the cost from its other operations. Private operators seek to expand their business taking into account factors such as investment requirements, regulator v operator and price competition. Price competition as a factor in the provision of waste services puts constraints on the ability of the Local Authority to act because the practice of subvention is illegal. A Local Authority official explains that

- the Competition Authority would soon put a stop to that. And
- the Minister would say "look, you're providing a service in waste
- management, the Polluter Pays, you must break even cash wise".[2]

Local Authorities, therefore, as actors in the management (or ownership) of the waste stream are in a dilemma that does not apply to the private sector. Firstly, they compete unfairly with the private sector in relation to the provision of waste services and infrastructure. The constraint here is that they cannot push costs down. Secondly, Local Authorities have waiverers and non-payers, whereas private operators do not.

Finally, because Local Authorities are charged with implementing the Hierarchy of Options strategy, they must encourage re-cycling and put infrastructure into place to allow for this. Another Local Authority official refers to the cost of re-cycling:

- Re-cycling. If you want to re-cycle a ton of any type of material,
- it is…it has a treatment cost, it has a transport cost, it has an
- export cost in the case of Ireland, because there's very little
- indigenous re-cycling other than collection, separate collection.[1]

The private sector does not have to involve itself with re-cycling, having no obligations under the Hierarchy of Options policy. The net effect is that commercial operators are allowed to, in the words of a Local Authority official, “cream off” the profitable aspects of waste service provision while at the same time having nothing to do with the re-cycling. In addition and as mentioned above, the private sector also only provides a service to those who pay. The dilemma for Local Authorities is that they provide services that are not profitable, in addition to providing services for those who cannot or will not pay.

4 Discussion

The viability of options and opportunity for profit in the waste business occurs with the introduction of Polluter Pays; a policy advanced within the context of environmental protection. The cost of waste directly relates to environmental policy making because it operationalises Polluter Pays. The issue of environmental policy is significant because the standard used to judge its success or otherwise relates to how effective it is. Arguably the main point about waste and cost in relation to the focus of this paper is that with Polluter Pays the nature of waste changes. Waste management goes from being a service Local Authorities provided traditionally and which was paid for through rates, to an opportunity for large returns on a profitable commodity.

With Polluter Pays waste becomes a commodity. As an economic commodity waste is subject to rational calculation and administration. Through the introduction of Polluter Pays waste becomes part of the capitalist enterprise. This paper raises the question of whether waste should be treated as a commodity on the market like any other. The formal-rational treatment of waste as commodity pervades the system with the introduction of Polluter Pays; a policy introduced to internalize the cost of waste pollution (landfill, incineration). The pursuit of profit drives the motivation for waste companies who look for highest returns on investment. In this situation the rational calculation for a waste operator is to move (receive) as much of the commodity as possible as fast as possible. The quicker waste moves and the greater the amount, the more the operator profits from this commodity in much the same way as any other commodity. The notion of waste as commodity is particularly relevant in the context of the Poolbeg incineration plant.

A contract for the construction and operation of Poolbeg was signed through a PPP between the four Dublin Authorities headed by Dublin City Council (DCC) and a waste company just before a change of government in Ireland in 2007. There is deep tension between the new Minister of the Environment (who is Green Party) and DCC as to the cost implications arising from the terms of this contract. The Minister is seeking to influence the cost of waste in order to prevent incineration from being profitable. The consequence is that whereas it is now government policy to downgrade incineration infrastructure, DCC are legally able and determined to press ahead with a project that is estimated to have cost the taxpayer €25 million euros in project management fees so far.

Under the terms of the contract DCC have guaranteed to provide 320,000 tons of waste per annum over twenty five years. The contract also has a clause called “put or pay”

which runs to some 29 pages of highly technical/legal detail. Under this clause DCC must "put" 320,000 tons of waste to incineration annually over 25 years or "pay" a fine to the operator. As DCC is funded mostly from the Exchequer the fine would ultimately be paid by the taxpayer. If the waste commodity is calculated at the current price of €80 per ton this clause guarantees €25.6m over the length of the contract.

Meanwhile the source of the waste is to come from the combined Four Dublin Authorities. These Local Authorities as rational actors will try to influence the waste stream by controlling the direction of municipal waste towards incineration. The fact that this strategy preferences the low end of the Hierarchy of Options policy is the wider source of tension between the Minister and DCC. The situation is further complicated by the overall decrease in the volumes of waste generated in recent years due to falling consumption patterns.

However arguably more serious from a cost point of view is that one of the four Local Authorities has recently announced that it is abandoning the provision of waste services. The stated reason is that competition from the private sector has been such that the Authority can no longer afford to compete. As a consequence one quarter of the sourced waste that has been guaranteed to the waste operator has gone. DCC will now have to produce 320,000 tons of waste annually from the other three Authorities in a climate of decreasing waste due to decreasing spending patterns. If not then a fine might have to be paid to the waste operator from the taxpayer, who as a customer of the system has already paid for their waste to be disposed of; waste which they did not produce in the first place. In this situation "modernisation" has caused capitalism to be rewarded three times over; by not paying (enough) at the production stage, by charging for disposal and by gaining revenue from fining if that source of income is not guaranteed to the company. The Poolbeg controversy is still on-going and will be taken up by the new administration in Ireland following the very recent General Election.

Polluter Pays as an economic instrument is being incorporated into waste management policy in Ireland. The cost consequence of Polluter Pays regarding Poolbeg from an ecological modernisation point of view arguably represents the uneven nature of policy implementation. This reflects the argument of Connaughton *et al* (2008) that waste management policy in Ireland illustrates the "quandary" between economic competitiveness and sustainability. On the other hand from a reflexive modernisation point of view the current impasse might represent a case of rationality turning to irrationality as the policy carries unintended consequences which come back to haunt the system (Adam, 2003). From this perspective the negative consequences of industrialisation fail to be adequately confronted as the creators of waste continue to profit while being let of the hook when it comes to Murphy's (1994) notion of unpaid waste cost.

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Interviews

[1] Interview with official, Dublin City Council, May 2007

[2] Interview with official Galway City Council, May 2007