

Environmental Value at Risk in the Hospitality and Leisure Sector:

The CRC Energy Efficiency Scheme and Landfill Tax

November 2009

Executive summary

Environmental issues such as the CRC and Landfill tax can have negative impacts on hotels' costs, cash flow and reputation. Appropriate management can limit these costs and, in the case of the CRC, can even generate a source of revenue.

Hotels need to determine their exposure to the CRC and Landfill tax, identify means of reducing associated financial impacts and integrate waste and energy reduction strategies into their operations.

Introduction

This article considers the Environmental Value at Risk (EVaR) in the UK hospitality and leisure (H&L) sector through cost increases from energy consumption and waste management.

This was done through analysis of the UK Government's CRC and Landfill Tax. Other sources of EVaR include rising energy costs, packaging tax, and the emergence of sustainable consumption and production. While the focus is on the UK industry, similar conditions exist across the EU.

Context

In recent years the scope of regional (EU) and national (UK) environmental legislation has extended from energy intensive industries, such as power generation, to non-intensive industries such as hospitality and banking.

Many companies within such industries have significant energy demands, generate large volumes of waste and induce environmental impacts along their supply chains. Given this ever increasing concern over man-made climate change and a need for government to generate revenue, governments have felt the need to act.

Sources of EVaR

The CRC Energy Efficiency Scheme (CRC)

The CRC is a mandatory cap-and-trade scheme introduced by the UK government and directed at non-energy intensive, non-transport industries which are not covered by the EU Emissions Trading Scheme (EU ETS) or Defra's Climate Change Agreements (CCAs).

It is estimated that around 5000 organisations will be covered by the scheme and the threshold for participation is electricity consumption of more than 6000 MWh measured through half hourly meters in the 2008 calendar year. This equates to electricity costs of roughly £500,000/annum.

The CRC requires participants to purchase allowances to emit carbon dioxide annually from the Government and to report on their emissions. Results will be published in a league table with the Government each year returning participants' money paid in allowances each year with a bonus or penalty based on their league table position.

PwC modelling suggest that the CRC could add around 3% to energy costs in each the first two years of the scheme, followed by more significant increases once the auctioning of allowances begins. Worst case scenarios show that the CRC could add 20% to energy costs in 2015 (reference overleaf).

The scheme is also expected to have significant impacts on a company's cash flow.

Determining responsibility for the CRC

Generally the legal obligation for the CRC falls on the counterparty to the energy supply contract, however in the case of organisations with multiple subsidiaries the group is viewed as one entity with the highest parent organisation acting on behalf of the group.

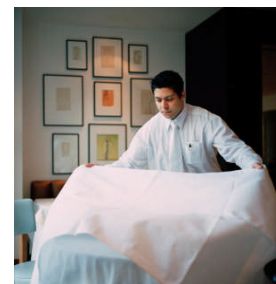
Identifying the party with responsibility under the CRC in the hotel sector should be determined on a case by case basis given the variety of ownership and management arrangements. For example in franchise agreements, franchisors and franchisees are considered a "combined entity" with the franchisor responsible for complying with CRC obligations. The franchisor's full portfolio of hotels will then be considered when determining eligibility for the CRC.

The table below provides a preliminary indication of which party may be responsible for CRC compliance under different hotel ownership/management arrangements. However, due to the complexity of the legislation and the industry's commercial arrangements, a case by case consideration is advised.

Hotel ownership/management arrangements	Legal obligation for CRC compliance
Franchise Agreement	Franchisor
Hotel Management Agreement	Hotel Operator
Lease	Tenant
Owner Operator	Owner Operator

Table 1: Potential responsibility for the CRC

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Cost impact of the CRC

The table below provides modelled impacts on energy costs resulting from the CRC for three scenarios.

Baseline energy cost	Scenario	Adjusted energy cost				
		2011	2012	2013	2014	2015
£500,000	Worst	510,189	517,087	564,226	582,757	601,288
	Middle	503,231	503,172	504,016	504,005	503,995
	Best	496,274	489,257	452,908	434,332	415,757
£750,000	Worst	765,283	775,630	846,339	874,135	901,932
	Middle	754,847	754,758	756,024	756,008	755,993
	Best	744,411	733,886	679,361	651,498	623,636
£1,000,000	Worst	1,020,378	1,034,174	1,128,452	1,165,513	1,202,577
	Middle	1,006,463	1,006,344	1,008,031	1,008,010	1,007,990
	Best	992,548	978,514	905,815	868,664	831,515

Table 2: Three scenarios for the impact of the CRC on energy costs.

The analysis above indicates that the CRC is likely to have significant impacts on energy costs. Poor performers in the scheme may see energy costs increase by around 3% in each of the first two years. From 2013, the auctioning of allowances will lead to greater cost increases, estimates suggest increases as great as 20% in 2015. In the same year top performers in the scheme could see their energy costs fall by as much as 16%.

The total value at risk in the scheme is the difference between the potential maximum cost increase and the maximum cost decrease. This is illustrated in figure 1 below. In this case the Value at Risk in 2015 of placing in the bottom 10% of the league table instead of the top 10% is in excess of £350,000.

PwC client analysis also suggests that hotels will experience significant negative impacts on cash flow with a percentage of monthly costs required to buy allowances by April 2011. This will be returned in October each year.

Some industry estimates put energy costs at 4% of total costs. Given this, the cost increases resulting from the CRC can be expected to have real impacts on RevPAR and a hotel's profitability. Further to this, the full impact of the CRC is only realised when it is considered that this financial burden may extend across a company's entire property portfolio, a pain compounded by the time of year that the payment is required (April). Figure 2 on the final page of this article illustrates the different components of EVaR that may be impacted by the CRC.

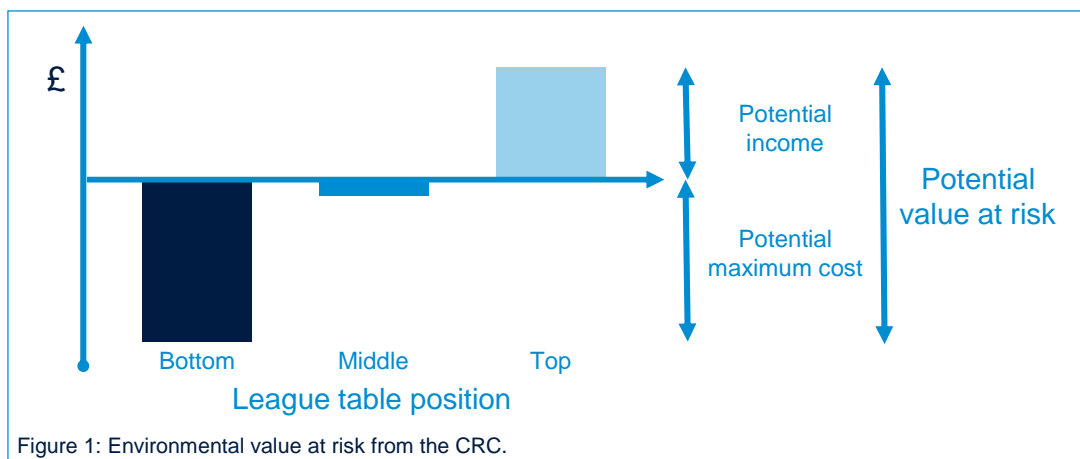


Figure 1: Environmental value at risk from the CRC.

Modelling assumptions

- Drivers of CRC costs:
 - Bonus/penalty rate
 - Operational costs
 - Capital costs of holding allowances
 - Impact of recycling payment
 - EU ETS prices
- Allowance price prior to 2013 fixed at £12/tonne. 2013-2015 estimates:
 - Low £8/tonne
 - Medium £15/tonne
 - High £32/tonne
- Best and worst case scenarios use high allowance price. Middle scenario uses medium price.

Scenario drivers

Worst

- High EUA prices £32/tonne
- Organisation in the bottom 10% of the league table
- Organisation purchases significantly more, or less, allowances than required, thus spending more than necessary or having to purchase additional credits.

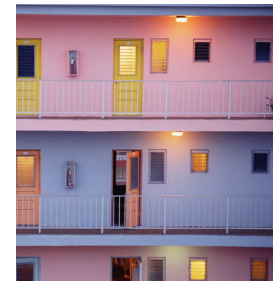
Middle

- Mid EUA price £15/tonne
- Organisation finishes mid-range in league table
- Organisation purchases more, or less, allowances than required

Best

- High EUA price £32/tonne
- Organisation in top 10% of league table
- Organisation purchases appropriate number of allowances

Environmental Value at Risk in the Hospitality and Leisure Sector: Energy and Waste



Landfill Tax

The UK Landfill Tax, implemented in October 1996, attaches a financial cost to waste sent to landfill in an effort to reduce waste, generate revenue and encourage more environmentally friendly forms of disposal. Waste management companies contracted to collect and dispose of waste will be the party who pays the Landfill Tax directly but these costs will be passed through to the contracting hotel.

Charges are levied by weight and there are two rates depending on the waste type. The lower rate (£2.50/tonne) applies to inactive or inert waste. The second, and standard rate, was set at £40/tonne in early 2009 and is set to increase by £8/tonne per year until at least 2013. This suggests that the tax per tonne of waste sent to landfill is set to double over the next five years. Given this and the fact that the hospitality and leisure sector generates relatively high, and increasing, levels of waste, disposal costs are set to rise sharply.

In addition to the Landfill Tax several waste management approaches can be considered, one of which is the introduction of a tax on packaging. For example, the Dutch Packaging Tax applies to both producers and importers and can act as a template for future schemes.

The table below provides indicative disposal costs for a range of hotel sizes and levels of waste generation. The key point here has less to do with the absolute cost of waste disposal but rather the relative increase over a short timescale.

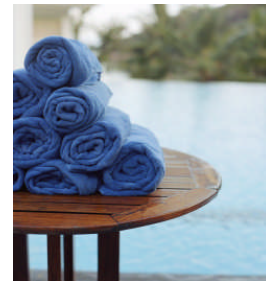
Hotel size (beds)	Waste per sleeper (kg)	Annual cost of waste disposal					
		2009	2010	2011	2012	2013	2014
150	1	£2,162	£2,594	£3,026	£3,458	£3,891	£4,323
	2	£4,323	£5,188	£6,052	£6,917	£7,782	£8,646
	3	£6,485	£7,782	£9,078	£10,375	£11,672	£12,969
200	1	£2,882	£3,458	£4,035	£4,611	£5,188	£5,764
	2	£5,764	£6,917	£8,070	£9,223	£10,375	£11,528
	3	£8,646	£10,375	£12,105	£13,834	£15,563	£17,292
250	1	£3,603	£4,323	£5,044	£5,764	£6,485	£7,205
	2	£7,205	£8,646	£10,087	£11,528	£12,969	£14,410
	3	£10,808	£12,969	£15,131	£17,292	£19,454	£21,615

Table 3: Modelled annual costs of Landfill Tax.



A hotel's waste disposal costs will largely be driven by the waste generated per sleeper night and the proportion of this that is sent to landfill. Cost savings are likely to result from a range of policies covering efficiency in production, sustainable consumption, and increased reuse and recycling.

Environmental Value at Risk in the Hospitality and Leisure Sector: Energy and Waste



Additional sources of EVaR

In addition to the CRC businesses in the hospitality and leisure sector are faced with other costs related to energy and waste management.

Energy prices are expected to remain high for the foreseeable future with obvious impacts on costs. High prices are being driven in part by factors such as electricity generators' obligations under the EU ETS, volatility in the wholesale electricity market and the UK's impending energy shortfall. In the case of the EU ETS, consumers such as hotels can expect to pay higher electricity prices as power generators pass on the costs of complying with their obligations under this cap-and-trade scheme.

The opening up of electricity generation in the UK to competition commoditised electricity and introduced volatility into the energy market. However, a longer term driver of energy prices is likely to be the UK's projected shortfall in power generating capacity. Estimates suggest that even if renewable energy can be harnessed effectively, the shortfall may still be as much as 20GW. One response to this shortfall is the commissioning of gas-fired power stations. However, decreasing North Sea gas production may increase reliance on imports from Norway and Russia. In the case of Russian gas this could expose British consumers to unreliable supply and volatile prices.

The figure below provides modelled changes in energy costs resulting from the CRC for three scenarios.

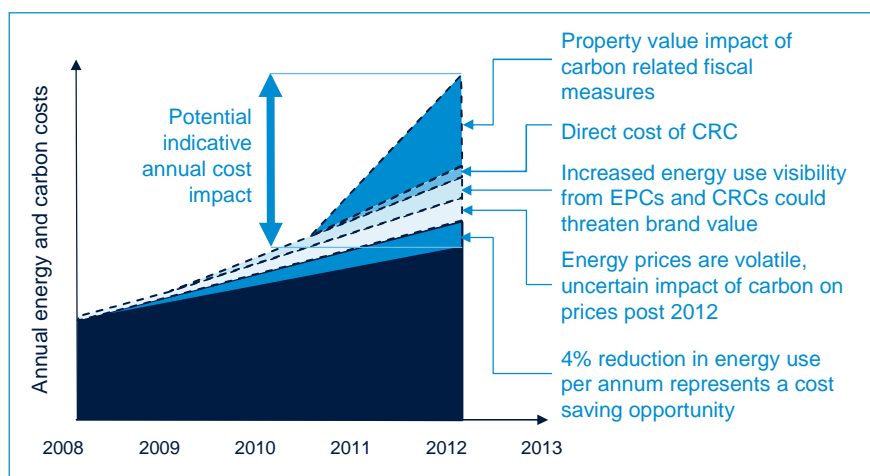


Figure 2: Components of EVaR impacted by the CRC.

Conclusions

While the true impact of the CRC can only be appreciated by considering a company's entire property portfolio the following is a hypothetical analysis of the EVaR for a 250 room hotel, with an annual electricity bill of £500,000 and covered by the CRC.

If the hotel finished at the bottom of the league table its energy costs could increase by up to 20% by 2015. Added to this are the cash flow impacts of buying allowances in April each year. The Value at Risk in 2015 of placing in the bottom 10% of the league table instead of the top 10% is in excess of £350,000.

The hotel may also experience increases in waste management costs, with payments to waste contractors increasing to cover charges under the Landfill Tax.

A 250 room hotel generating 3kg of non-recyclable waste per sleeper night could be required to pay over £21,500/annum to dispose of waste to landfill. This is double what the same hotel would currently be spending and when multiplied across a company's portfolio can amount to millions of pounds in costs.

Companies need to start planning now as our experience has shown that implementation is often more complex and time consuming than companies anticipate. Early planning will help companies to implement the monitoring and reporting systems required to comply with the CRC, and identify areas of potential cost savings.

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How PwC can help

PwC helps clients to understand existing exposure to EVaR, project forward the impacts of new and existing regulations, and actively manage the reduction of these costs. The first step is carry out an EVaR diagnostic.

PwC has already helped several clients prepare for the CRC and our experience has identified initial steps for implementation. The first of these is a "health check" that determines a company's obligations under the CRC and exposure to the Landfill Tax, current levels of preparedness, and potential impacts on corporate and sustainability strategy.

This initial review will aid in the development of an implementation plan that will facilitate cost reductions and cost-effective compliance with the CRC, incorporate financial impacts into group management systems and investment appraisal processes, and optimise performance.