

Irish Supreme Court Restores Common Sense to the Single Electricity Market

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Energy Regulation Insights

From the Editor

Does the European Union's Emissions Trading Scheme (ETS) for CO₂ emissions "cap and trade" a real resource? Do emissions allowances allocated free to electricity generators have an opportunity cost? And if so, does a levy on the value of these allowances have an opportunity cost? In 2011, Ireland's electricity regulator raised these questions, and answered them "yes", "yes" and "no", directing generator companies not to include the carbon revenue levy in their offer prices. Given the current state of the Irish economy, it is understandable that the Irish government would wish to tax electricity generators without imposing additional costs on electricity consumers. However, in March 2012 the Irish Supreme Court overturned the regulation, based on the realisation that the levy is in fact an input into generation and a cost, and that it has an opportunity cost.

This case shows that additional costs imposed on producers will pass through to consumers in a competitive market, particularly when the costs are linked to output. Politicians working with—or considering whether to introduce—a cap-and-trade scheme such as the EU ETS need to understand better how market prices react to new costs. Trying to prevent competitive markets from passing through taxes and levies into prices is often bad for competition and bad for efficiency.

This paper examines the facts, economics, and economic arguments on both sides in a case that demonstrates that regulatory agencies have little or no room to re-define economic terms in ways that suit government policy.

Graham Shuttleworth, Editor

Does the European Union's Emissions Trading Scheme (ETS) for CO₂ emissions "cap and trade" a real resource? Do emissions allowances allocated free to electricity generators have an opportunity cost? And if so, does a levy on the value of these allowances have an opportunity cost? In 2011, Ireland's electricity regulator raised these questions, and answered them "yes", "yes" and "no". Justifying the answer to the final question caused some difficulty for the Irish energy regulator, whose arguments were rather convoluted. The answer also inconvenienced Irish electricity generators, which are obliged to bid their opportunity costs into the Single Electricity Market. It amounted to a decision to deny them the opportunity to recover their costs. They appealed to the Irish Supreme Court which, luckily for them, answered the final question "yes". This outcome restores common sense to generator bidding—as defined by "the man (or woman) on the Crumlin omnibus".

Short History of the Case

In March 2012, the Irish Supreme Court overturned a decision of the Irish High Court, by deciding that the Carbon Revenue Levy did impose a cost on electricity generators, and specifically a cost that should be included in the offer prices that generators submit to the Single Electricity Market (SEM).

The levy is a tax (imposed by law but administered by the industry) on the cost of emissions of carbon dioxide (CO₂) incurred by electricity generators. For the purpose of the levy, this cost is represented by the market price for CO₂ emissions established within the EU Emissions Trading Scheme (ETS). The Commission for Energy Regulation had argued that such an apparently abstract concept was not a short run marginal cost of generation, and could not have an opportunity cost.

Under the ETS, generators must acquire and surrender EU emissions allowances (EUAs) in sufficient numbers to cover their total emissions of CO₂. However, in the first two phases



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of the scheme (2005-07 and 2008-13) they receive some allowances free. The Irish government had enacted the levy with the intention of clawing back the value of EUAs issued free to generators, but imposed the levy on actual emissions of CO₂, thereby making it a short run marginal cost of generation.

The generators' licences and a Bidding Code of Practice (BCOP) oblige generators to include in their offer prices the change in "total costs" of "employing [each] cost item for the purposes of generation", where each cost item must be valued at "opportunity cost".¹ The Commission for Energy Regulation (the Irish authority charged with regulating the electricity market) directed generators not to include the cost of the levy in their offer prices, on the grounds that it did not meet these criteria. In its decision the Commission referred to the generator's licences and the BCOP, but also to the policies and consultations that had underpinned the design of these documents.

Two privately owned companies operating generators in Ireland, Viridian Power Ltd (VPL) and Endesa Ireland, appealed the Commission's decision.² The High Court established that only the generator licences and the BCOP were relevant to the Commission's decision, but agreed with the Commission that generators should not pass the costs of the Levy through to consumers, on the grounds that the Levy was not an input "employed" in generation.

VPL took issue with this view of the levy and appealed again. The Irish Supreme Court decided after all that the levy is a cost of generation, that whoever pays it foregoes cash, and that the levy therefore has an opportunity cost. In reaching this decision, the Supreme Court cast aside complex arguments about the difference between payments and costs, and invoked "the man (or woman) on the Crumlin omnibus" to provide a reasonable interpretation of certain terms in the generators' licences and the BCOP. The judge decided that the levy was a component of "total costs", and also that foregoing cash to pay a Levy gave it an "opportunity cost". Generators are therefore allowed – indeed, obliged – by their licence to include the levy in their offer prices.

The Supreme Court's decision restores marginal cost pricing in the Irish electricity market. It also effectively removes the ability of the regulator to define terms in unorthodox ways, which may limit regulatory discretion in years to come. The following sections explain the economic concepts behind the decision.

The Economics of CO₂ Emissions for Electricity Generation

1. The EU ETS puts a price on using the sky to dump CO₂

The EU ETS is embodied in national plans, EU regulations, and electronic registries, so it is sometimes hard to remember that it represents a set of property rights over a real resource. The EU ETS is in effect a scheme to "nationalise the sky over Europe" and then to allocate pieces of it to industrial users as a depository for their emissions of CO₂.

More specifically, the scheme is part of European policy on climate change. The EU ETS puts a limit on the amount of CO₂ that industrial installations can emit, just as other legislation limits emissions of many pollutants into the earth, the atmosphere, or the waters of our planet. Recently, 26 economists wrote to President Obama, praising the scheme as a means to put a price on a scarce resource, namely "the earth's ability to safely absorb greenhouse gas emissions". The scheme is the atmospheric equivalent of a land reform, or of an enclosure movement, converting a common resource or open range into private property.

Like the 18th century movement to enclose common land in England, the EU ETS provides some compensation for the loss of previous rights. If an industrial installation had been emitting CO₂ in the years before the scheme was dreamed up, it would receive sufficient EUAs—free of charge—to cover at least some of its expected emissions. The scheme also allows EUAs to be traded. Some recipients have chosen to sell their EUAs rather than to use them, whilst others have chosen to buy EUAs in order to maintain or increase production. In this way, EUAs are re-allocated to those who value them most highly.



2. Free EUAs feed into wholesale prices because they have an opportunity cost

By using EUAs to cover its emissions, the generator foregoes the chance to sell them. Whether a generator receives EUAs free of charge or buys them in the market, using them up therefore has an opportunity cost equal to the current market price. This market price of EUAs feeds into the marginal costs of generation and has been pushing up electricity market prices. Politicians have sometimes expressed surprise at this (entirely predictable) outcome. The head of the German competition authority even tried once to suggest that such behaviour was incompatible with competition (but he faced a barrage of criticism and soon changed his position).⁴ Throughout Europe, the market price of EUAs is now viewed as part of the marginal cost of generation.

In Ireland, the regulatory authorities have taken this view one step further and have incorporated it into the Bidding Code of Practice (BCOP), which is binding on all generators located in the Republic of Ireland and Northern Ireland.⁵ The BCOP obliges all generators to submit offer prices to the day-ahead market including all short run marginal costs (i.e., the difference in total costs caused by whether the generator produces output the next day or not). The BCOP also states that all inputs (including carbon) must be valued at their opportunity cost (rather than acquisition or accounting cost), where opportunity cost is defined as:

“The value of the benefit foregone by a generator in employing that cost-item for the purposes of electricity generation, by reference to the most valuable realisable alternative use of that cost-item for purposes other than electricity generation.”⁶

In March 2008, the Single Electricity Market Committee, representing the regulatory authorities in Northern Ireland and the Republic, specifically decided that generators should include the full short run marginal costs of all EUAs in their offer prices.⁷ That short run marginal cost is represented by the current market price for EUAs, rather the price the generators paid for them. That means that generators must submit offer prices based on the current market prices of the fuel and of the EUAs they require per MWh of electricity produced.

The policy of opportunity cost pricing was introduced because of fears over the large market shares of some generators and the perceived potential for market abuse.⁸ However, it conflicted with the purpose of the Carbon Revenue Levy, and caused a problem for the Commission for Energy Regulation, the authority charged with regulating electricity generation in the Republic.

3. The Carbon Revenue Levy was intended to claw back the value of free EUAs

Generators include the market value of EUAs in electricity prices, even if they received them free of charge. This “mark-to-market” process creates value for electricity generators in Europe—in some cases, this value was a substantial share of total annual profit.⁹ The Irish government – which is facing a large budget deficit—decided to take back some or all of this value by introducing a levy on allowances. The new law imposed the levy on the revenues “attributable to the emissions from each [generator]”, defined as 65% of the market value of EUAs surrendered (to cover actual emissions) during each trading period.¹⁰ In practice, therefore, the levy was not a “lump-sum tax” on the value of a fixed quantity of allowances. By levying it on EUAs surrendered, the government make the levy into a cost incurred when a generator produced electricity and emitted CO₂, i.e., it was a short run marginal cost.

4. Generators must submit offer prices equal to short run marginal costs, with inputs valued at opportunity cost

Irish electricity generators must offer all their output into the SEM, a day-ahead electricity pool that covers both Northern Ireland and the Republic of Ireland. The rules of the SEM include the BCOP, which states that generator’s offer prices (“bids”) must include all short run marginal costs, defined as the change in total costs caused by the decision to generate on any particular day, and where inputs must be valued at their opportunity cost.

The generators duly declared their intention to incorporate the levy into their offer prices which would increase the costs of wholesale electricity in the SEM. This outcome was consistent with the generators’ treatment of fuel, EUAs, and other costs, but the Irish government may not have wanted its levy to be borne by customers in this way. The Irish energy regulator certainly took the view “that since consumers were already paying for the opportunity cost of carbon in end-customer tariffs, consumers should not in addition have to pay for the cost of the Carbon Revenue Levy”.¹¹ The generators’ declaration therefore prompted the regulator into action.

5. CER directed the generators not to include the levy in their offer prices

The staff of the Commission for Energy Regulation (CER) seems to have understood the difficulty caused by the levy, but looked for a way to prevent generators passing it through to customers by raising their offer prices. Eventually, the CER directed generator companies not to include the Carbon Revenue Levy in their offer prices, on the grounds that the



BCOP did not permit it. At this stage, the CER argued that the levy was not a “real resource cost”, a phrase that appeared in consultation documents on the BCOP, but not in the BCOP itself.¹² As the CER put it, “whilst the language [of the BCOP] might on a simple reading appear sufficiently broad to capture costs such as carbon levy payments, that provision should be read in light of the policy intention underpinning the Condition which was...to align physical generation decisions with real resource costs.”¹³ Two generators, Viridian Power Ltd and Endesa Ireland feared that this ruling would lead to them losing money on their sales of electricity and appealed against the CER’s decision.

6. The High Court found that the licence defined SRMC and opportunity cost

The parties submitted their appeals, along with reports by economic experts for both sides. The lawyers for the generators appointed a member of NERA as their economic expert. NERA pointed out that the levy was a short run marginal cost of generation and that, in paying it; the generators gave up cash, which was an opportunity cost. Following this logic, the BCOP specifically mandated generators to include the cost of the Carbon Revenue Levy in their offer prices.

The CER’s economic expert wrote that pass-through of a levy was undesirable from the standpoint of economic efficiency since it was not a real resource, but only a transfer (even though generators were permitted to pass through other taxes and levies, such as fuel duties). He also mentioned in passing that it would be “regrettable” if the outcome were decided on a “narrow legalistic approach”, but the judge took exception to the view that his decision would be based on anything other than the law.¹⁴

The judge decided that the decision should depend on the contents of the generator licence (and the BCOP which is attached to it), and that concepts only stated in other documents (such as “real resource costs”) were not relevant.¹⁵ Nonetheless, the judge decided to uphold the CER’s decision that the CRL should not be passed through, because it was not an input “employed in the generation of electricity”¹⁶ as required by the BCOP (paras 7 and 8). Unhappy with this outcome, the generators were given leave to appeal to the Irish Supreme Court.

7. Supreme Court found that the levy was part of “total costs”, and had an opportunity cost

The Supreme Court offered another opportunity for both sides to explain the economic and legal reasoning behind their arguments. The process of explanation made clear the rather fine (some might say tortuous) distinctions between concepts that lay behind the CER’s case.¹⁷ These arguments, as summarised by the judge, were effectively as follows:

1. That the main costs to be included in offer prices were the cost of fuel including Value Added Tax or Excise Duty, plus maintenance costs and certain wages;
2. That there was an important distinction between “the cash used to pay the levy” (which had an opportunity cost) and “the levy itself” (which did not);¹⁸ and
3. That the levy “has no existence until after generation has taken place” and is therefore not a cost of generation.

The CER therefore argued that the levy was not an opportunity cost, and/or was not a cost, and so should not be included in offer prices. The CER also referred to the Act, which describes the levy as a tax on “revenues received [by generators] ... as is attributable to the emissions [of CO₂]”, as evidence that it was not an input into generation but a tax on revenues.¹⁹ These arguments are best described as “legalistic” (i.e., they are not based on sound economics). The generators, on the other hand, argued that the levy was an input, that it had an opportunity cost (in the form of foregone cash), and that it should be included in offer prices.

The Supreme Court judge gave full consideration to the arguments, but seems to have found it difficult to give any credence to those of the CER.

First, the judgement stated that the levy is an input into generation, like excise duty or VAT, rather than a tax on the output of electricity or the associated revenue.²⁰

Second, the judgment agreed that the levy was a cost. The BCOP explains that short run marginal costs should be estimated as the difference in “total” costs caused by generation over the timescale of a day. The Supreme Court judgment considered this concept of “total costs” and concluded that it “any reasonable person” (including the “man (or woman) on the Crumlin omnibus”) would include the levy in a definition of total costs.²¹



Third, the judgement also concluded that the Levy had an opportunity cost, stating that it was hard to see how the levy differs from Excise Duty (or VAT), and that it could not be separated from the payment in cash.²² Since Excise Duty counts as an opportunity cost under the BCOP, there was no reason to treat the levy differently.

On that basis, the judge ruled that the generators should include the cost of the Carbon Revenue Levy in their offer prices for the SEM.

Summary and Implications

Given the current state of the Irish economy, it is understandable that the Irish government would wish to tax electricity generators without imposing additional costs on electricity consumers. However, this case shows that additional costs imposed on producers will pass through to consumers in a competitive market, particularly when the costs are linked to output. Politicians working with—or considering whether to introduce—a cap-and-trade scheme such as the EU ETS need to understand better how market prices react to new costs to avoid disappointment. Competitive markets often pass through taxes and levies into prices. Preventing such behaviour is often bad for competition and efficiency.

Within the electricity sector in Ireland, the case will also have long term implications for regulation. It shows that regulatory agencies have little or no room to re-define economic terms in ways that suit government policy. Economists will take heart that basic economic concepts are capable of straightforward interpretation by non-economists. When this regulatory decision was opened up to judicial scrutiny, common sense—as embodied in the views of “the man (or woman) on the Crumlin omnibus”—prevailed after all.

EndNotes

1. The BCOP is Annex A to a paper issued by the All-Island Project (AIP), which set up the Single Electricity Market (SEM). See SEM Committee (2007a), The Bidding Code of Practice: A Response and Decision Paper, AIP-SEM-07-430, 30 July 2007, Annex A: The Bidding Code of Practice, para 7, page 10.
2. Huntstown Power Ltd, an affiliate of Viridian Power Limited, was also a party to the appeal.
3. Letter from 26 Economists to President Obama on 14 March 2011, page 1.
4. See Radov, D, and Klevnas, P, “CO2 Cost Pass Through: German Regulators’ Shaky Economics”, Energy Regulation Insight, NERA, January 2007.
5. Generators throughout the island of Ireland participate in the Single Electricity Market, which covers the whole island of Ireland—both the Republic of Ireland and Northern Ireland (which is part of the United Kingdom). By joint agreement of the regulatory authorities, equivalent restrictions apply in both jurisdictions, but the Carbon Revenue Levy applies only in the Republic.

EndNotes

6. SEM Committee (2007a), para 7 page 10.
7. SEM Committee (2008), Bidding the Opportunity Cost of Carbon Allowances: A Decision Paper, SEM-08-32, 27 March 2008, page 1.
8. As the Regulatory Authorities in Northern Ireland and the Republic put it in 2007, “The aim of the Bidding Code of Practice is to achieve the benefits of competition in the SEM. The SEM is a concentrated market and one with an explicit capacity payment mechanism. Both attributes support the requirement on generators to bid at Short Run Marginal Cost, in the first instance by preventing the exercise of market power and in the second by preventing the double payment of scarcity rents. Bidding at SRMC also prevents the gaming of constraint payments.” SEM Committee (2007b), Proposed Bidding Code of Practice in the SEM Consultation Paper, 18 May 2007, AIP/SEM/07/198, page 3.
9. Generators’ ability to pass through the opportunity cost of using EUAs derives from the national, or at least European, nature of the electricity market. Other industrial sectors were not able to raise their prices because they faced international competition from producers outside the EU. These other sectors used the freely allocated EUAs to offset the cost of their obligations under the EU ETS—but still faced a choice over whether to use them or sell them.
10. Electricity Regulation (Amendment) (Carbon Revenue Levy) Act 2010, para 40D.
11. SEM Committee Meeting, Meeting No. 28, 27 May 2010, page 3.
12. SEM Committee (2010), SEM Committee Communication: Inclusion of Costs of the Carbon Levy in Commercial Offer Data within the SEM, 8 October 2010, page 1.
13. SEM Committee (2010), page 1.
14. High Court Judgment of Mr. Justice Clarke delivered 9 June 2011, para 7.12.
15. High Court Judgment, para 7.14.
16. High Court Judgment, para 7.17.
17. Supreme Court Judgment of Mr. Justice Hardiman delivered 23 February 2012, page 16.
18. “In a supporting submission, [counsel for the CER] relied on para. 7 of BCOP and the use of three particular phrases, ‘cost item’; ‘employed’; and ‘opportunity cost’. He repeated his submission that it was the opportunity cost, and not the actual cost of permitted items which is permitted to be bidden-in. The levy was not a permitted item and did not have an opportunity cost, considered as a thing in itself.” Supreme Court Judgment, page 16.
19. Electricity Regulation (Amendment) (Carbon Revenue Levy) Act 2010, Preamble, page 3, “The revenues received by certain electricity generators through participation in the Single Electricity Market as is attributable to the emissions from each installation of which an electricity generator is the operator”.
20. “I consider that the levy is ‘employed’ as an ‘input’ in the generation of electricity to precisely the same extent, neither more nor less, than is the VAT or excise duty on fuel when so used”. Supreme Court Judgment, page 24. In fact, the Supreme Court judge was incorrect to refer to VAT, since generators reclaim payments for VAT and VAT does not feature in offer prices in the SEM.
21. The judge put it as follows: “‘total costs’ includes all costs, each and every cost item. I think this is the sense in which the word would be read by the man on the Clapham omnibus, the man on the Crumlin omnibus, or any reasonable person”. Supreme Court Judgment, page 24. Passengers on public transport have a long history in British and Commonwealth law; The “man (or woman) on the Crumlin omnibus” is an Irish version of “the man on the Clapham omnibus”, a British judge’s standard of a reasonable person first used in 1903 (Judgement



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