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Taxing and Trading in Corporate Energy Activities: Pioneering UK Reforms to Address Climate Change

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Overview

LEE SUET LIN JOYCE

Company Charges under Singapore Law: Legal and Practical Implications

The article discusses current legal developments relating to company charges in Singapore in a comparative context. It sets out to investigate recent cases that distinguished the charge from other transactions as well as to outline intricate differences between a fixed and floating charge. The practical implications flowing from how a particular transaction is classified are examined.

Articles

JENS MUNK PLUM,
JEANETTE BANGGAARD KOFMANN
AND JAMES DILLEY

Recent Changes to the Danish Competition Act

This article examines the recent changes to the Danish Competition Act of 1988. Most commentators have focused on the increase in the level of fines and indeed this is one of the most important aspects. The other main amendments prohibit horizontal price agreements even if they fall within the de minimis provisions, clarify the application of the prohibition on restrictive agreements to joint ventures and strengthen the competition authorities' powers of investigation.

BENJAMIN J. RICHARDSON
AND KIRI L. CHANWAI

Taxing and Trading in Corporate Energy Activities: Pioneering UK Reforms to Address Climate Change

The energy activities of British companies are being subject to unprecedented public scrutiny in order to address dangerous increases in greenhouse gas emissions. But rather than rely on direct regulation, authorities have introduced novel economic instruments, including a climate change levy and an emissions trading scheme. The structure and effects of these pioneering reforms are examined.

JOHN LIN

Wanderers, Please Just Come In—New Law Lures Foreign Law Firms Into China

China urgently needs foreign law firms to provide international legal services, while firms are keen to embark on the emerging market. To create a win-win situation, the Government enacted a new law to embrace more firms. To some extent the opportunities are lessened by later ministerial rules, however the new law is a good move forward.

OLUSEYE AROWOLO

Unclaimed Dividends in Nigeria: A Case of Contending Interests

In Nigeria, the Securities and Exchange Commission (SEC) recently announced its intention to create a trust fund to manage unclaimed dividends running into billions of Naira. By this proposal, SEC hopes to bring within its control the vast pool of money represented by unclaimed dividends. However, judging from reactions to the proposal, it is not favoured by shareholders, particularly of public quoted companies. This article attempts to analyse the contending perspectives on unclaimed dividends and seeks to resolve them in the context of Nigeria's legal and regulatory framework.

News Section

An International Review of Recent Legal and Regulatory Developments
Introduction: Energy and Economic Instruments

The landscape of UK environmental law is changing rapidly, with important implications for British companies. In recent years, energy activities have surfaced from the relative backwaters of UK environmental regulation to occupy the limelight. The reason is climate change. As the scientific prognosis of global warming firmed, and evidence of the likely economic and environmental impacts became clearer, the energy sector has surfaced from the relative backwaters of UK environmental law. The Royal Commission on Environmental Pollution recently advised that the "dash for gas" and improved performance of renewable energies including wind and solar power must be encouraged because of the "dual threat" to sustainable development that climate change will envisage many environmental processes—and the economic systems that depend on them—in a pervasive way. Most environmental problems in the UK so far have been discrete and specific—an unsightly motorway development here, a polluting factory there—quite unlike global warming, whose omnipresent effects will require comprehensive and integrated policy packages hitherto largely unfamiliar to government administrators.

The British Government is seeking to thwart rising greenhouse gas (GHG) emissions principally by regulating energy activities, a difficult cross-sectoral strategy encompassing energy use in industry, transport, housing and other sectors. Carbon dioxide (CO₂) is the main culprit, in 1990 accounting for 79 per cent of all British GHG emissions, as against methane, contributing 10 per cent, nitrous oxide an additional nine per cent, and smaller amounts from chemicals such as chlorofluorocarbons. The Government's Climate Change Programme of November 2000, co-ordinated by the Department for Environment, Food and Rural Affairs (DEFRA), sketches how the UK intends to meet its Kyoto Protocol commitment of a 12.5 per cent reduction on 1990 levels of all GHGs by 2012, and the achievement of the separate domestic goal of a 20 per cent cut in CO₂ emissions below 1990 levels by 2010. The UK is one of the few OECD countries to have made real progress, with its GHG emissions 14.5 per cent below 1990 levels in 2007, achieved through restructured industries and the switch from coal to cleaner natural gas. Energy efficiency is twice that of the 1970s, meaning that the UK is producing more with less. But further gains of these magnitudes seem doubtful in the absence of radically new policies and tools, and robust economic growth in recent years threatens to increase GHG emissions again.

Electricity generation is the single largest source of GHG emissions. The UK's electricity consumption jumped by 16 per cent from 1990 to 1999, although CO₂ emissions declined because of the "dash for gas" and improved performance of nuclear generation. The switch to gas was a one-off event, and further GHG emission reductions must accrue by other means, such as harnessing renewable energies including wind and solar power. The Government admitted: "The UK's energy sector is still largely reliant on fossil fuels and, unless they can be replaced by plants with low or no emissions, this dependence will increase after 2010 as existing nuclear power stations reach the end of their licensed lifetimes." The Royal Commission on Environmental Pollution (RCEP) recently advised that CO₂ reductions of 60 per cent by 2050 are necessary if Britain is to avoid dangerous climate change. The relative economic costs of this task may not however be so great: one study estimated the cost of achieving the RCEP's goal as about only 0.02 per cent of GDP.  

1. For an overview of dangerous climate impacts in the UK, see M. Hulme, J. Turner, and G. Jenkins, Climate Change Scenarios for the United Kingdom: The UKCIP20 Briefing Report (University of East Anglia, 2002).
2. Department of Environment, Food, Rural Affairs (DEFRA), The UK's Third National Communication Under the United Nations Framework Convention on Climate Change (DEFRA, 2001), p.18. In all, the UK's GHG emissions in 1990 were 208.4 million tonnes of CO₂ equivalent (MtCe).
4. DEFRA (n.2, above), p.5.
5. ibid., p.16.
6. ibid., p.28.
GDP per year. Of course, significant technological, economic and regulatory changes are first necessary to achieve such a low carbon economy.

The thrust of the Government's plan to promote energy efficiency and expand the role of renewables is to re-orient corporate behaviour through economic instruments. The key policy tools for this task are the Climate Change Levy, a Carbon Emissions Trading System, and a structure for trading in renewable energy supply obligations. The Government's focus is the industry sector, although it accounts for a minority of Britain's GHG emissions: transport is the biggest scourge, accounting for about 34 per cent of final energy use, followed by households (29 per cent) industry and services (23 per cent) and agriculture (14 per cent). However even the targeting of industry has its limits. The Cabinet Office's recent P1U Energy Review declared: "there is a strong likelihood that the UK will need to make very large carbon emission reductions over the next century. However, it would make no sense for the UK to incur large abatement costs, harming its international competitiveness, if other countries were not doing the same." Climate change concerns, whilst salient, are also only one of several key issues informing UK energy policy, others being security of supplies, energy affordability and market competition.

In many jurisdictions, including the UK, economic instruments have become the championed policy tool for disciplining corporate energy use (and other environmental activities). As early as 1992 the UK Government boldly announced, "in future there will be a general presumption in favour of economic instruments". This commitment was reaffirmed in the 1999 Sustainable Development Strategy, which stated: "The Government will explore the scope for using economic instruments, such as taxes and charges, to deliver more sustainable development. Such measures can promote change, innovation and efficiency, and higher environmental standards."

The EU has also emerged as an enthusiastic proponent of market instruments. Its 1993–2000 Fifth Environmental Action Programme called for a "broadening of the range of instruments".

and in 1997 the European Commission published a Communication on Environmental Taxes and Charges in the Internal Market.

There is a flourishing academic literature on economic instruments as a means of environmental policy. Economic theorists posit that environmental taxes will impose lower costs on developers to achieve a given level of pollution reduction than conventional emission control regulations. Efficient businesses will seek to lower their tax burden by investing in clean production technologies where this is cost effective. In this way, environmental taxes can give polluters an ongoing incentive to seek more efficient ways (for example, technological innovations or recycling), to reduce emissions, whereas there is little financial incentive to do better once prescribed emission standards are met under conventional regulations. In contrast, where taxes set a "price" on use of the environment and rely on markets to effect corresponding behavioural changes towards the desired environmental standard, tradable emission permits flow from a governmental determination of the environmental standard in the form of an emissions "cap" and then rely on market forces to price and allocate the distributed tradeable emission rights. The creation of exclusive and transferable pollution rights in theory provides businesses with an incentive to use environmental entitlements efficiently. Trading allows polluters to tailor their regulatory burdens by transferring the burdens to where they can be borne most cheaply, thus allowing society to obtain the same level of overall environmental protection at a lower cost.

Climate Change Levy: the structure

Levy rates and affected sectors

Although the UK previously objected to EU proposals flagged in the early 1990s for a European carbon tax, fearing loss of control over national

Levy concessions and off-setting entitlements

The CCL was advanced on a roughly revenue neutral basis, to be offset by a 0.3 per cent reduction in all employers' national insurance contributions (NICs). The scheme includes a 15 per cent discount on the Levy for energy intensive industries participating in a Climate Change Agreement to meet targets for improving energy efficiency or reducing carbon emissions. The CCL's main environmental impact is further assuaged by the enhanced capital allowances (ECAs) scheme, whereby investment in specific energy efficient products (for example, high energy consuming machinery and office screens) enables companies to reclaim 100 per cent of the capital allowance in the first year. The ECAs are administered by the Carbon Trust, established in April 2001 as an independent, non-profit-making body to encourage businesses to make a 20 per cent reduction in all CO₂ emissions by 2010. Failure to meet agreed targets may see the government's credits in the public sector trading scheme, and may purchase allowances if necessary to meet target shortfalls.

Implementation of the Levy

Assessing the overall financial and environmental impact of the Levy, the picture after 18 months is insidious. During its first year, the CCL was reported to be a net burden on public spending. It was predicted to raise about £150 million of CCL receipts over three years to the adoption of low carbon technologies. The Trust's remit extends to provision of advice and information, research and demonstration projects. Overall, the CCL package promises a wonderful synergy of more energy efficiency, job growth through investment in renewables and the stimulation of a bigger energy efficiency debate, without draining businesses' finances.

The main way energy hungry companies can manage their levy liability and improve energy efficiency is through agreements negotiated between their relevant sector trade associations and DEFRA. The scheme is restricted to "energy intensive" industries, as defined in Schedule 1 to the Pollution Abatement and Control (England and Wales) Regulations 2000, and agreements operate until March 31, 2013. To date, umbrella agreements with 44 trade associations have been concluded, each representing firms given that because of their high-energy needs because of their size they have less access to connections to the manufacturing industry. But, such differences do not seem to account for the fact that energy intensive industries are eligible to receive an 80 per cent CCL rebate by participating in the CCAs. Apart from differential sector effects, there are also possible geographical variations in the impact of the CCL. Business Strategies predicted such regional disparities, with northern British manufacturers to be disproportionately affected because of their higher concentration of energy intensive companies (thus widening the "North-South" divide).

Recently, several studies have looked at the actual implementation of the Levy. SGS Consulting surveyed 100 small and medium enterprises (SMEs) in 2002, and found that one in five enterprises were feeling the Levy as a negative burden on their business, and that almost one-quarter of firms did not understand the Levy's purpose or how its revenue was spent. One-half of SME manufacturers believed than the CCL would have a negative impact on their business and only one-quarter of respondents believed that the Levy would yield positive effects. The study found that 27 per cent of SMEs had implemented a programme to monitor and manage energy use, and only 16 per cent had installed energy efficient lighting being the most popular method. SGS Consulting suggested special measures were needed in the CCL package to reduce costs and support SMEs given that because of their size they have less access to carbon taxes already exist in the Scandinavian countries and other European countries and various non-British European countries for their high-energy requirements such as New Zealand. Existing academic research on the economic effects of carbon taxes is also equivocal.

For more highlighted possible regional and sector specific effects of the Levy. The chemical, plastics and steel industries are among industry sectors commentators predicted would be maligned by the CCL because of the high-energy requirements of the manufacturing and low staffing. By contrast, the services sector would be relatively unaffected and possibly even benefit because services such as hotels, catering and retailing rely heavily on public transport connections to the manufacturing industry. However, such differences do not seem to account for the fact that energy intensive industries are eligible to receive a 80 per cent CCL rebate by participating in the CCAs. There are differential sector effects, there are also possible geographical variations in the impact of the CCL. Business Strategies predicted such regional disparities, with northern British manufacturers to be disproportionately affected because of their higher concentration of energy intensive companies (thus widening the "North-South" divide).

CCL agreements or access to exempt CHP-derived electricity.\textsuperscript{37} A second survey, conducted by London Electricity, highlighted how working in the energy industry revealed that 42 per cent of respondents felt the CCL had led to a net increase in their business's costs and 33 per cent did not believe that the levy would achieve its objectives of energy management initiatives.\textsuperscript{38} In terms of renewable energy information, 60 per cent of respondents agreed that more guidance was needed on how to obtain and utilise energy. A third, more detailed study on the CCL, conducted by the Federation of Small Businesses, also suggested the Levy is having a discriminatory impact on small firms.\textsuperscript{39} It found that 60 per cent of SMEs are better off because they benefit from the NIC reduction whilst remaining under the CCL exemption threshold. Of the 34 per cent of SMEs subject to the Levy, FSB concluded that SMEs were financially worse off.\textsuperscript{40} The FSB study saw the likely losers of the CCL being SMEs involved in plastics processing, hospitality and certain retailers. It gave as an example a plastic moulding company employing 30 staff that was unable to participate in a CCL Agreement and incurred a net loss of £6,875 due to the CCL in its first year of operation.\textsuperscript{41} The study was critical of the additional costs of participating in the CCL Agreements, namely membership and joining fees.\textsuperscript{42}

Generally, existing studies emphasise that certain business sectors are worse off from the levy, although overall the economic burden and dislocation is modest. Information from the Department of Trade and Industry showed that the Levy added 0.9 per cent to the monthly input prices index for materials and fuels in the April 2001, hardly a staggering impact, and one offset by the recycling of levies to industry through, inter alia, reduced NICs and the ECAs.\textsuperscript{43} In evaluating the effect of the CCL on energy prices, it should also be seen in the context of the not insignificant declines in electricity prices in recent years: enhanced competition in energy markets resulted in industrial electricity prices in the UK falling by some 20 per cent in the late 1990s.\textsuperscript{44} Regarding possible changes, the Levy scheme could be amended to recycle all CCL receipts into energy efficiency grants and similar investments rather than offering blanket NIC reductions to businesses generally.\textsuperscript{45} Also, it seems authorities could do more to impart information to affected industries on the structure of the Levy and its rationale, as well as further investigation of possible new concessionary arrangements for SMEs. Perhaps the most crucial issue that will shape the success of the Levy, is whether there will be sufficient green energy to meet consumers' demands and from businesses wishing to reduce Levy payments. If businesses lack alternatives to fossil fuels, then the Levy may end up being treated as just another tax utilised by the government. The question of expanding supply of renewable energies is considered later in this article.

Greenhouse Gas Emissions Trading Scheme

The CCL is not a discrete policy mechanism, but is part of a package of climate change response instruments. Another key mechanism is the Emissions Trading Scheme (ETS), which is also likely to feed into the wider EU environmental trading market proposed. In March 2002 the Commission released a Proposal for a Directive of the European Parliament and of the Council establishing a scheme for greenhouse gas emission allowance trading within the Community.\textsuperscript{46} The draft Directive covers just carbon emissions, on the basis that they amount to 80 per cent of GHG emissions today and trading would be open only to major industrial facilities. If adopted, the Directive would empower EU Member States to grant polluters certainty of emission allowances in a within allocated national allowances, which would be traded among eligible businesses across the EU. As with the EU's plans, the UK's mechanisms are to enable industry and regulators to gain early experience in the context of the technicalities of emissions trading pending commencement of global-wide trading under the auspices of the Kyoto Protocol. The allocation of exclusive and transferable pollution right in theory gives firms an incentive to use their environmental entitlements in the most cost-effective manner tailored to each company's operational requirements.\textsuperscript{47} The UK's ETS is a voluntary initiative only, partly to encourage businesses to innovate and invest in new technologies to reduce their costs of complying with targets.\textsuperscript{48}

Trading participants

There are several ways companies may join the ETS. The main way is as a "Direct Participant", whereby firms volunteer to take on absolute targets for meeting their emissions, and for emission allowance payments.\textsuperscript{49} Alternatively, if companies will exceed their target they may purchase the necessary additional emission allowances from other ETS participants. Overall, the scheme should reduce the total quantity of emissions and the ETS participants over the period 2005 to 2006 by the descending emission cap targets set annually. According to DEFRA, this will give "all participants ... a direct incentive to innovate and invest in new technologies to reduce their costs of complying with targets."

The share of the incentive payments was determined by the government-administered auction held on March 11-12, 2002.\textsuperscript{50} As a result of the auction's success, restrictions on auction participation had to be lifted to include: Asda, Barclays, British Airways, BP, Dupont UK, Ford Motor Company, Land Lease Real Estate, Rolls Royce, Shell UK and Tesco. The auction was short of the £215 million incentive payments by opening the bidding for one or more sources in return for financial incentive payments distributed at the auction.

49. Environmental Protection Act 1990, s.153, provides the basis for taxing the incentive payments to participating organisations.
50. ibid.
52. For details of the auction process, ibid., pp.15-16.
54. ibid.
55. ibid.
56. DEFRA (n.51, above), p.33.
Change Agreement (CCA). Rather than receive emission allowances up-front via the auction process, "Agreement Participants" (as they are known) may receive emission allowances at the end of each emission period. It is a (biennial period) for the amount by which they exceed their CCA targets. If they miss their target, they could also purchase additional allowances to make up for the shortfall. However, Companies that make profits from the sale of Registry to trade allowances even though they are cannot benefit from the CTS financial incentive payments for emissions that benefit from the CCL discount, but a company in a CCA may still bid through CTS for financial incentive in relation to their emissions not covered by the CCA targets. Companies may also enter the CTS as Project Participants. By this route, companies undertake specific UK-based emissions reduction projects and sell any resulting emission credits to other participants in the Scheme. The details of this method of entry are still being formulated by DEFFRA. At this stage, carbon sequestration projects (for example, afforestation activities) would not be eligible projects because of "complexities and uncertainties" involved in measuring carbon sequestration. Finally, it is also open to anyone to open an account in the Registry to trade allowances even though they are not a polluter. Accordingly, an environmental non-government organisation could open a trading account to purchase emission allowances in the market and then cancel them. Trades are deemed to be revenue items for tax purposes. Thus, companies purchasing allowances within the CTS can avoid tax, and companies that make profits from the sale of allowances will be taxed. The Government has stated that it does not consider trading in allowances to be an investment activity regulated under the Financial Services and Markets Act 2000, although dealing in derivatives on allowances would amount to a regulated investment activity.

Trading in renewable energies

The renewables obligation

Apart from the ETS, the other mainstay of the Government's climate change policy is the Renewables Obligation Order 2000, SI 2000/241, under the Energy Act 2000, and is supervised by Ofgem. It obliges UK electricity suppliers to increase their provision of renewable energy supply to 10.4 per cent by April 2010, and there are stepping stone targets beginning with 3 per cent by March 2003. The RO incentivises early entry by the RO community is seeking to meet umbrella energy targets set by the EU. The 1997 EU White Paper on renewable energy envisaged doubling renewable generation in the EU within 15 years. The Powergen directive has specified indicative targets for each Member State. The EU has adopted two targets for renewable energy—a 12 per cent target for renewable energy to be about 2.6 per cent of the total energy consumption, and a 22.1 per cent target for renewable electricity as a percentage of total electricity consumption. The UK Government has endorsed these schemes. However, the lack of change considerations, but also to promote national energy security given predictions that Britain may need to rely on imports to fuel its burgeoning economy. Under the RO scheme, which has replaced the ineffectual Non-Fossil Fuel Orders, suppliers in compliance with their green energy quota are issued a Renewable Obligation Certificate (ROC). Ofgem is responsible for enforcing ROCs, and is among institutions responsible for the extent of compliance by suppliers. Most renewable energy sources (for example, wind and solar) may be used to meet the RO, except energy from waste and large-scale hydropower. If any of the suppliers cannot meet the RO, it can buy out a fee to Ofgem for each MWh short, currently set at £50 per MWh, or purchase ROCs from other suppliers willing to trade them. The alternative is the Power Purchase Agreement, under which electricity supply companies may pass on the costs of purchasing renewable electricity to their customers; recent retail electricity prices suggest the RO has added 3 per cent to consumers' electricity bills. The money collected by Ofgem from penalties is paid back to suppliers in proportion to how much renewable energy they have sourced. Thus, the electricity trading incentive to invest in renewables, as suppliers will receive more money from the penalty fund and obligations in connection with electricity from renewable sources. 62. Ibid., Sch. 1. 63. European Commission, Energy for the Future: Renewable Sources of Energy, COM(97)999 final, (November 26, 1997). 64. Directive 2001/77, On the promotion of electricity produced from renewable energy sources in the internal electricity market, September 27, 2001. 65. Directive 2001/77, Act 36L. 66. Cabinet Office (n. above), p. 1. 67. House of Commons Trade and Industry Committee, Security of Energy Supply (HC 264). 68. In relation to this scheme and its problems, see House of Commons Trade and Industry Committee, A Sustainable Energy Strategy? Renewables and the PIU Report Process, 2000, Select Committees, Environmental Audit, A Sustainable Energy Strategy? Renewables and the PIU Report Process, 2001. 69. Anonymous, "Electricity Suppliers Hike Prices to Pay for Environmental Obligations" (April 11, 2002) 25(13) Marketing Week (UK). 70. A. Lloyd, "The UK Renewable Obligation" [2001] 5(1) European Energy Law: New Measures for Sustainable Development; 71. HCEAC (n.69, above), para. 51. 72. See B. Richardson, "European Energy Law: New Measures for Sustainable Development" [2002] 4(13) Butterworths Resource Management Bulletin 156. 73. HCEAC (n.69, above), para.15.

will not have to pay as much into it. The RO scheme is a long-term measure, with obligations for 25 years and with the size of the obligation open to being increased progressively. 65 Already, an increasing number of electricity suppliers are offering "green energy", such as Powergen (offering totally green power contracts) and British Energy (offering partial green power deals). Yet, much work needs to be done to realise this target. Currently, it is estimated that about 10 per cent of the UK's electricity (4,669 MWh) is derived from renewable sources, the bulk of which comes from large-scale hydroelectric plants. The HCEAC believes the RO is a long-term measure, with total electricity generation from renewables by 2010 at current rates, and it disclosed that in 2001 there was a slight fall from 2.6 per cent to 2.6 per cent (primarily due to less production from small hydropower plants). The UK ranks near the bottom among EU States in terms of renewable energy generation, reflecting an historic lack of support for renewables compared to Germany, Denmark and Sweden. Although the UK has extensive potential renewable energy sources (especially wind power in Scotland), the HCEAC has cautioned, "such potential is still far from being exploited". For example,iums during project construction, such projects have faced". 79. The UK's electricity grid also appears to be a source of concern. The Utilities Act 2000 separated the electricity supply function from the distribution network function. It is a grid transmission network that transmits power to electricity grid users. Wind farms, CHP plants and certain other energy generators require a system able to accommodate small and intermittent sources. This is referred to as the distribution network operators to manage networks to facilitate "embedded generation", whereby small generators can enjoy flexible distribution network access, although concrete solutions have yet to be adopted. Another problematic feature of electricity networks is the UK's New Electricity Trading Arrangements (NETA). NETA was introduced on.

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March 27, 2001, replacing the Electricity Pool as the wholesale electricity market for England and Wales. Under NETA, electricity suppliers and generators trade forward through bilateral contracts, and penalties are imposed where demand exceeds contracted levels or generation falls short of it. Through these market reforms, NETA sought to stimulate genuine competition into wholesale electricity trading and provide price reductions for consumers. Concerns are emerging regarding the adverse impact NETA is having on small and intermittent electricity generators, which comprise many renewable energy suppliers. Small energy generators, whose supplies may be variable and less reliable, there is a danger of breaching contracted supply levels and so incurring heavy financial penalties. The problem for wind, for example, is that if generators offer to supply and the wind subsides, the supplier has to buy in the "spot" market, which can result in expensive purchases.

According to Ofgem, NETA is already driving down prices in England and Wales with annual contracts agreed by large industrial customers involving prices some 10 to 15 per cent on last year, and down 35 per cent over the last two years. An electricity market that generates on-going, sizeable price reductions for businesses and households may be economically welcome, but it is also a market that can dampen the incentives to use energy more frugally and efficiently. It is a market at odds with climate change policy if such consumption is of fossil fuels. In the absence of a much larger renewable energies market and a much larger margin of difference between the retail price of green and brown energy, the electricity market deregulation reforms may undermine the Government's initial GHG emission control mechanisms.

Conclusions

Several important lessons are emerging from current UK reforms to control GHG emissions. First, the effectiveness of the Climate Change Levy requires complementary measures to reinforce the financial incentives conveyed to promote energy efficiency and reduce use of fossil fuels. The Emissions Trading Scheme, the Enhanced Capital Allowances, and the Renewables Obligation are some of these key complementary measures. However, it is clear that there remain various barriers to stimulating the renewable energies market despite the exemption of renewables from the Levy. Complex planning regulations, inflexible local governments, and electricity grid structures are some of these barriers. These barriers are not insurmountable, but do need to be addressed soon in order to fully realise the potential of the Levy.

Secondly, the current UK reform focus on corporate energy activities is inappropriately restrictive given that the largest, and growing sources, of fossil fuel emissions are the transport and household sectors. To avoid dangerous climate change, UK policy must more assertively target these sectors. The Government believes that its climate change programmes, including the CCL and the ETS, will reduce carbon emissions in 2010 by some 15 per cent below their 1990 levels, and all Kyoto GHG regulated emissions 23 per cent below 1990 levels. But beyond this timeframe, the Government has admitted that, without new policy measures, GHG emissions (especially CO2) will blot because of economic growth and the retirement of nuclear power stations.

Among the limited initiatives to address transport emissions, the Government released in 2002 a 10-Year Plan of £180 billion new investment and public spending to cut traffic congestion and reduce pollution. The existing vehicle excise duty and company car tax reform also provided modest incentives to reduce private motoring. Yet, the Government appears unwilling to engineer more radical reforms because of the threat of a political backlash from motorists, whose fuel price protests in 1999 caused the Government to abandon the fuel duty escalator. There has been even less progress in the household sector, where social justice considerations have tended to mollify the Government from hiking energy charges that could disproportionately hurt poor families. So far the Government has been relying on soft, non-intrusive measures, including reduced VAT on home energy efficiency services and materials; subsidies on efficient gas central heating boilers; energy efficiency labelling schemes; and periodic promotional advertising campaigns on energy efficiency. The Government is also making amendments to Building Regulations to spur energy efficiency building design.

Overall, the UK reforms are an admission of market failure in energy markets to address environmental issues like climate change. The essential challenge for the Government is to implement market correction instruments that can factor environmental costs into energy markets. Although the CCL is a pioneering step, this is largely new terrain for government reformers and it is very likely that the Levy, and other policy instruments, will be adjusted and fine-tuned as experience with economic instruments grows. For British companies, the regulations and incentives governing energy use are changing rapidly, but they are changes that do not necessarily entail competitive stifling taxes. Rather, off-setting tax reductions (for example, NICs) coupled with new market opportunities in the renewable energy and emission trading field, suggest these changes will, apart from the environmental benefits, be economically beneficial to the UK. Already, the United States is looking very isolated in its refusal to ratify the Kyoto Protocol, as Australia, Canada and other Western countries move to join the Protocol in response to pressures from domestic businesses that see green energy markets as a potentially profitable new domain.

84. Ibid., p.44.
85. Department of Transport (DoT), Transport 2010—The 10 Year Plan (DoT, 2001).
87. For example, the Energy Efficiency Commitment, and the Home Energy Efficiency Scheme; see further DEFRA (n.2, above), p.32