ENERGY & ENVIRONMENT

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Climate of Opinion

The Stockholm Network Energy and Environment Update

Issue 5 October 2007

Contents

Welcome to *Climate of Opinion* – Helen Disney and Paul Domjan[1]

Bringing together experts from industry, academia and the think tank world, this month's edition of Climate of Opinion provides an overview of alternative energies and examines their role in tackling the multiple energy problems we face.

If you have any comments or recommendations about *Climate of Opinion*, or would be interested in contributing an article for a future edition, please contact Helen Davison: helend@stockholm-network.org. We hope you enjoy this newsletter.

Commentary – Gulya Isyanova[2]

It seems that, in hindsight, 2007 might prove to have been a turning point for renewable energy. Over the last year, the growth in awareness on the two inter-linked issues of climate change and energy security has grown dramatically.

Climate change is now a key component of mainstream politics. Voters are increasingly expecting something to be done and a turn to renewables is increasingly seen as the obvious solution. The simultaneous trend towards 'resource nationalism' has led to energy security also becoming a prominent concern in the public's mind. With fossil fuels concentrated in increasingly politically difficult states and with western energy companies finding it ever harder to gain access to these supplies, a major increase in the use of renewables is now seen as a means both to improve the bargaining position and to decrease the energy dependence of consumer states.

The convergent progression of these two trends points to renewable energy and technology becoming the stone with which to knock two birds squarely on the head. Technology will be a key component of a realistic, practical adaptation to climate change as well as to energy security concerns.

Clean technology and different renewable options are currently at different stages of development and commercialisation however, and the big gap between highly advanced research & development and actual marginal industrial/consumer deployment is a pressing problem for the industry.

This gap is also an issue in politics. In March 2007, for example, EU leaders signed up to a binding target of a 20% boost in overall renewable fuel use by 2020. This included a 10% minimum target for the use of bio-fuels in transport by 2020 and a less specific commitment to increase the use of solar, wind and hydroelectric power. However, there are concerns over the implementation of these targets. As the European Renewable Energy Council points out "…setting an ambitious target does not automatically deliver the results". Although gaining initial political consensus on the matter and the impetus for a European agreement was impressive, what is badly needed now is an appropriate policy framework to actually enable the EU to reach these targets, and to do so without damaging its economic competitiveness. It is crucial that a framework is put into place that not only fosters the growth of the renewable energy industry and encourages the emergence of new technologies, but also plays a part in generating overall economic growth.

Both governments and businesses are beginning to recognise the need to take decisions today to avoid catastrophic climate change and recognise the need for reduction of CO2 emissions. However, they have different value preferences. Governments want an emissions cap, whereas businesses first and foremost want stability and predictability of markets. Governments must therefore find a way to accommodate these concerns.

Various policy approaches can be taken, with their attendant pros and cons. One option is subsidies, in many ways a double-edged sword.

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[2] Gulya Isyanova is Energy and Environment Research Fellow at the Stockholm Network

Subsidies may provide much-needed capital and assurance at the initial development stages, but they also have consequences later down the line. Not only do they defer adequate development of the commercial viability of a particular renewable, which ultimately hinders its deployment, but the accompanying overly-detailed regulations scare off private investors. This is currently the case in Sweden, where years of subsidies and regulations, and a lack of consideration of commercial viability from the very beginning have now led to a major gap in investment capital that is hindering the promising emerging clean tech industry. Swedish clean technology is in danger of withering away.

Mandatory targets for renewable use are another option. The problem with these is that they tend to be short-sighted in their focus, whereas the issue needs a long-term perspective. Moreover, these targets tend to over-emphasise the means – particular technologies, over the ends – necessary overall carbon reduction at acceptable cost.

Finally, there is the option of carbon taxes, which aim to establish a clear cost associated with the negative externalities of carbon emissions. However, there are three problems here. Firstly, as with all taxes, regardless of their actual effect, carbon taxes will be seen as an impediment to economic growth and a revenue generator for governments, leading those affected to try to find loopholes to avoid it. Secondly, as taxes are redistributed, it is unlikely that the money collected will then go back into further energy investment. Thirdly, and most importantly, they do not allow us to set an emissions target, rather government has to estimate the carbon tax rate that will produce necessary emissions reductions.

The most appropriate approach to renewable energy is a market-based one. However, in this complex policy environment government action is needed to create a market that, unlike most markets which optimise the efficiency of production, optimises the efficiency of reduction. As with many other approaches to innovation, the best the government can do is very little. A policy impetus is needed to create the market in the first place, with both short-term and long-term considerations in place. In the short-term, governments should set a global price for carbon and let the markets take care of the rest. Heavily subsidised alternative energy programmes are often bound to fail, as Sweden is currently finding out to its chagrin. Only by setting a price further up the value chain, by setting a cap on total emissions, can we allow competitive renewable sources of energy to emerge and compete on a level playing field with more traditional sources. Besides, this is a far more politically viable option than introducing a new tax.

In the long-term, governments need to establish a level playing field by creating a long-sighted legal framework of clear rules and property rights. Investment in energy particularly needs assurance in this respect as the pay-off is long-term. By setting a long-sighted CO2 target and introducing a system of permits, governments can then stand back and let the markets set the prices. This 'cap and trade' system would lead to carbon being traded where it is cheapest, thereby minimising any dampening effects on the global economy.

In short, governments ought to create mechanisms that cap the short-term cost of emission control, but that at the same time allow for long-term carbon price discovery. These mechanisms must enable individual risk management and provide profit-based incentives for technologies to emerge. They should also provide incentives to manage demand. A 'cap and trade' system would not only be more effective in the environmental goal of cutting down CO2 emissions, but can simultaneously cater for political and economic goals too.

Swedish Cleantech: Hanging in the Balance of Success – Waldemar Ingdahl[1]

Swedish 'cleantech' may be hot at the moment. The question is will it take off or just fizzle out?

Since the first oil crisis in the 70's Sweden has done extensive research on energy efficient

[1] Waldemar Ingdahl is the director of the Swedish think tank Eudoxa (www.eudoxa.se)

technology, such as solar and hydrogen power, and on improving operational performance, productivity and efficiency while reducing costs, inputs, energy consumption, waste and pollution. Although it depends on nuclear and hydro power, energy efficient technology is also one of the reasons why Sweden is one of the few nations in the EU to reach its Kyoto targets.

Firms such as Ageratec in Norrköping (bio diesel), Kockums in Malmö (concentrated solar power), Ecoheater in Luleå (efficient motor heaters) and Swedish Biogas International have attracted international attention. Swedish cleantech firms also enjoy good cooperation with universities and delegations from Europe, the US, India and China have visited Sweden in order to study the industry's progress.

According to the daily newspaper *Svenska Dagbladet* just $3.8 million of venture capital was invested in cleantech in the first quarter of this year (a mere 5.3 per cent of the total capital available), while the US invested $2.9 billion in cleantech last year (11 per cent of the venture capital).

The US has been quick to capitalize on this lack of capital and has made several deals to acquire Swedish firms. This June a bilateral Implementing Arrangement on Renewable Energy Cooperation was agreed, finalising the deals that President Bush and Prime Minister Reinfeldt discussed at their White House meeting in May.

The influx of American capital has of course raised fears that Swedish innovations will not come to fruition in Europe. Deputy Prime Minister Maud Olofsson has on several occasions pointed out that the emerging industry must stand on its own two feet, especially if American firms are so interested.

The venture capitalists have so far told Mrs. Olofsson that they require more government investment in research in order to take the risk on cleantech investments. The problem is that up until now the industry has been dependent on heavy government subsidies and been valued for their "noble cause" rather than their actual results. This shows one of the dangers of supporting emerging industries; while the project may actually start to show results, the business environment is undeveloped for a step to the markets.

Markets in emerging technologies need long-sighted and clear rules of conduct in order to develop, with politics interfering no more than absolutely necessary. Instead, the focus has been on environmental value, rather than business value, which has led to overly detailed regulations and quick changes of policy when political fads ebbed or flowed.

Sweden's cleantech industry is at a crossroads. It has some very advanced research going on, with some quite interesting products being developed but it takes a lot of effort to go from promising technology to profitable cleantech products. The investments required in establishing the accompanying infrastructure in order to make it accessible for the industry and consumers have been indicated as substantial, but this is not the case in all sectors. The oil companies, for instance, have to continuously reinvest to keep their distribution systems going, and upgrading for new products in established infrastructures would reduce initial costs. Thus it is necessary for cleantech companies to consider strategic alliances downstream even further.

Without investments the start ups will wither away. The Swedish government needs to clear up regulations, which would further the interest of American investors, and also discuss the issue in the EU in order to open up for European competition. What other European countries can learn from the Swedish example is first that the initial success in setting up an environment of cleantech companies was due to the early demand for the industry in the 70s. Developing a cleantech business environment will require attention to the industry's and consumers' needs early on. Furthermore, the Swedish example shows that a policy of subsidies can backfire later on, and that it is better to focus policy not on supporting companies but in tax reductions for products being introduced. The present situation, with an industry not crossing the market threshold, can be avoided.

Hydrogen: The World of Energy in Transition – Jeffrey A. Serfass[1]

Right now, we may be standing on the brink of the next big energy transition, or diversification, following the long transitions from wood to coal to natural gas to petroleum and other energy sources.

The international community recognises hydrogen as a key component of a clean, sustainable energy system. The future hydrogen economy features hydrogen as an energy carrier, much like electricity is an energy carrier which will fuel stationary power, transportation and portable power for electronics.

This significant change to the energy infrastructure will happen because of the combination of market forces, stimulated and accelerated by government policy, support and incentives.

When President Bush announced in 2003 his objective that a child born during that year should be able to learn to drive in a hydrogen automobile, he set in motion a significantly expanded hydrogen fuel initiative and accompanying fuel cell research. Since then, we have seen the U.S. Congress provide the funding for the expanded research agenda including early testing of hydrogen fuel cell vehicles and the building of the first hydrogen fueling stations in several cities. We have seen General Motors, Honda, BMW, Toyota, Chrysler and others put dozens of vehicles, or even a hundred or more, in demonstration and real fleet applications. Fuel cell companies are offering stationary power plants at varying sizes for remote, back-up and small commercial operation. And hydrogen and fuel cell products are being combined in packages for portable power, material handling, and people moving in environmentally sensitive areas.

Today, significant national and international hydrogen programmes continue, but we also see energy attention turned to options that are viewed as nearer term, including wind, solar and biofuels.

The Drivers to Hydrogen Remain Clear and Dramatic

- Energy Security

Most countries desire to be free to use a diversified blend of their own energy resources rather than importing fuels from other countries or regions. Hydrogen, like electricity, can benefit energy security because it can be produced from a variety of primary energy sources including hydro, wind, solar and nuclear power. In transportation, hydrogen can become an alternative to petroleum-based fuels.

- Environmental Stewardship

Hydrogen can benefit the environment because it can be used with zero or near zero emissions and if produced with carbon-free resources like wind, hydro and nuclear power can provide an emission-free "well to wheels" energy system.

- Economic Growth

With technological change as fundamental as an energy shift to hydrogen, and with useful energy being produced increasingly with local energy resources, job development and investment opportunities are created. Countries are seeing this important opportunity before them, as are states and cities. Whole new businesses are being created.

Challenges

There are however, significant challenges to be overcome before hydrogen becomes a competitive fuel.

- Vehicle Hydrogen Storage

The vehicles need a range of at least 300 miles with the combined power plant (fuel cell or internal combustion engine) and storage. Honda is announcing a 300 mile range with their new FCx fuel cell and 350 bar (5,000 psi) gaseous hydrogen. Others are moving to higher pressure

[1] Jeffrey Serfass is President of the National Hydrogen Association, USA

(700 bar or 10,000 psi) to get the range. Commercial vehicles with acceptable range are practical with today's gaseous and liquid hydrogen options, and researchers are seeking even better solid material storage options.

- Reliable, Low Cost Fuel Cells

Researchers at laboratories and industry agree that we are within a factor of two of acceptable fuel cell life time and costs, with volume manufacturing. BMW has 100 vehicles on the road using an internal combustion engine, only slightly modified for hydrogen (with gasoline as secondary fuel when hydrogen is not available) and with a near zero-emissions profile.

- Fuelling Infrastructure

Hydrogen fuelling stations already exist in Singapore and Washington, DC. Fuelling is not a big issue today because small portable hydrogen fuellers are on the market and can be placed where needed and fleet and transit operators can build their own capabilities. But, there is a need for dialogue among auto companies, hydrogen fuel providers and government agencies, to coordinate planning for the expansion of hydrogen vehicle fleets.

- Safety Codes and Standards and Regulations

The global community must continue to develop harmonised standards for hydrogen storage, fuelling and use so that fuelling stations can be sited, cars can be driven and parked, and fuel cell power generators can be positioned near loads, without labour-intensive technical and safety reviews. This work is proceeding well but it must expand significantly for codes, standards and regulations to be in place early in the market expansion.

- Education

Policy and industry stakeholders must be supported by an informed public that is willing to make the investments to continue the transition to hydrogen. The public is distracted by nearer-term options that also deserve support, including renewable solar, wind and biofuels. These options are important, and will be producers of hydrogen as their costs continue to decline, but the goal of a significant transition to hydrogen will not be met for decades to come if we do not address the challenges today.

Markets Have Begun the Transition Already

Hydrogen-powered products are in use today and hydrogen use will accelerate in the near to mid-term (5 to 15 years) as technologies and infrastructure evolve and as government policies provide incentives to leaders.

The first commercial electricity generation units powered by hydrogen fuel cells have been introduced by Plug Power and others to provide continuous reliable power to buildings and remote power and backup power for emergency response.

Portable hydrogen fuel cell power for soldiers in the military is being tested today and manufacturers are developing equipment to power laptop computers and other electronics.

Chrysler, Honda, General Motors and BMW are putting several hundred vehicles on the road right now.

Using crops or waste biomass products to produce vehicle fuels makes sense. Utilizing solar and wind energy where it is available to produce electricity makes sense. The power of the hydrogen future is that it can be produced from any fuel or energy resource and with one gradual infrastructure change it can provide emission-free transportation... and stationary power… and portable power for electronics.

President Bush has sought competitive commercial hydrogen automobiles by about 2020. Some now think that with the right incentives in place it could be even earlier.

Coal can plug the Energy Gap – Tony Lodge[1]

The UK's dependence on fossil fuels will continue far into the future. Managing this dependency and mitigating the environmental impact should be the main focus of policymakers.

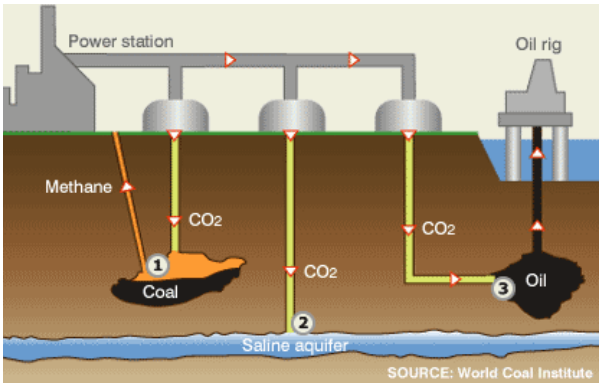
Coal is a key constituent of the energy portfolio. It currently produces more than 37% of electricity generation annually, which has risen to 50% over the last two winters. CO2 emissions from coal are higher than alternative fuels. Conventional coal fired power stations produce 900 kg of CO2 per Megawatt hour, compared with gas fired plants which produce around 450 kg of CO2 per MWh.

However, a clean coal Integrated Gas Combined Cycle (IGCC) generation model can eliminate nearly all of these emissions. It would significantly reduce CO2 as well as providing pressurised gas for injection into the North Sea Oil fields to enhance the recovery of oil reserves, in a process known as Enhanced Oil Recovery (EOR).

The process of coal gasification not only has the ability to capture 90% of CO2 emissions for sequestration as demonstrated by up and running IGCC plants, it also changes coal into another more flexible form of energy – 'syngas', which is 99.54% pure hydrogen. When fired through a conventional gas turbine syngas emits nothing more than water vapour.

The benefits are clear. Syngas would improve our negotiating position with imported gas producers, reduce the carbon content of power generated from coal, and could possibly cap the price of gas. Syngas could also be injected into the national gas grid.

[1] Tony Lodge is author of *Clean Coal: A Clean, Secure and Affordable Alternative*, published by the Centre for Policy Studies in 2007.



But how can this technology be encouraged?

By 2015 the UK is likely to face an electricity generation gap of between 20 to 30 GW. Policy should be in place now to develop the next generation of power stations that will fill this gap. The Treasury and oil companies, as the two financial beneficiaries of Enhanced Oil Recovery, should conclude their negotiations and agree the fiscal tax incentives which will motivate oil companies to invest in the necessary infrastructure for transportation of the CO2 into the oilfields. Britain's first IGCC clean coal power station, the Powerfuel project in Yorkshire, is already in discussion with third parties with a view to the construction of a pipeline to transport CO2 from coal and gas power stations which could be equipped with CCS in the near future. There are many secure storage sites in the North Sea close to these sites.

Electricity consumers shouldn't be forced to carry the development and initial costs of CO2 capture and sequestration. These should be borne by the "deep pockets" that receive the financial gain. As moral as it appears, no company is going to support new initiatives that reduce its competitiveness, but it would be prepared to commit to do so if it is a national policy and financial incentives are in place. Government policy support and a realistic carbon price would encourage greater development in this field.

The Government is set to announce which projects have been successful in securing important funds to demonstrate and develop

clean coal technology. This development is a step in the right direction.

Furthermore, a market based system with a clear long term carbon price for this new IGCC clean coal option would foster a less risky investment environment, but a major setback for planners still exists. For it to be viable, the new IGCC plants require the same allocation of CO2 allowances as existing coal plants, whereas at present it would receive the allowances of a CCGT (gas fired station). Yet carbon emissions from clean coal power stations are well below that for gas fired stations on which the UK is becoming perilously over dependent and which is driving electricity costs to new highs. It would be bizarre for the European Trading Scheme to support polluting stations with a much larger allocation of CO2 credits than a more expensive new IGCC capable of carbon capture.

The Many Myths of Ethanol – Cristiane Coutinho[1][2]

A decade has passed since the Kyoto agreement, in which ethanol was declared as being one of a number of future green fuels. During this period worldwide concern over the effects of carbon emissions on climate change and the need for greater energy security has intensified dramatically. Hardly a week passes without a new scientific report or politician announcing the horrible effects of climate change and the need for drastic changes to energy policy in Europe and North America. In the context of this debate ethanol has found itself being pushed from the back-pages of research reports to the front pages of mainstream newspapers.

Yet, most researchers do not see ethanol as being a major future source of energy in the fight against global warming; to many, it is not even viewed as a particularly green or effective fuel at all. According to a recent article in *The Economist* ("Ethanol, schmethanol", issue 39), the real reason ethanol receives so much popular attention is that people simply know how to make it. Critics point to the fact that ethanol can produce carbon dioxide emissions similar to that of normal gasoline, yet is less energy efficient; ethanol-run cars can damage car engines; that the most used mixture – the E85 – produces lower mileages per litre than gasoline; ethanol production pushes up the cost of food; and, finally, ethanol production displaces farmers and contributes to deforestation.

However, current research and opinion-making focuses almost exclusively on the corn-based ethanol produced in the United States. While it is true that the recent increase in production and use of corn-based ethanol has been exponential – fuelled as much by federal subsidies as real market-based demand – focusing on the ethanol produced and used in the United States risks completely misinforming the current debate and misrepresenting what ethanol can actually do, both for the environment and for energy security. Researchers, let alone the media and most policymakers, seem to forget and ignore that Brazil has been producing sugarcane based ethanol and has been using it as a substitute for gasoline since the 1970s.

Today, Brazil is the largest exporter and producer of sugarcane ethanol in the world, with around 80% of the country's automotive fleet being run on a mixture of anhydrous ethanol and gasoline. Yet not much attention has been paid to the Brazilian sugarcane based ethanol. This is a serious error.

Both the production and use of sugarcane ethanol is very different from its corn-based cousin. In many ways, they are very different types of bio-fuel. The crucial difference between corn-based and sugar-based ethanol is in the production process: corn needs to be broken down into sugar before ethanol can be produced. It is thus a multi-step process requiring a lot of energy and engineering to get to the end product

[1] Cristiane Coutinho is Fixed Income Analyst at Bloomberg. Cristiane has just completed a Master's in Management at Warwick Business School; her dissertation was an analysis of the Brazilian ethanol industry and a financial analysis of its biggest producer, Cosan.

[2] The views expressed in this article are those of the author and do not represent the corporate view of Bloomberg or its affiliates.

of ethanol. Transforming sugarcane into ethanol on the other hand is much more straightforward, requiring much less in the way of energy and engineering.

Apart from this fundamental advantage in production, the Brazilian sugarcane based ethanol has a number of distinct advantages compared to corn-based one. Brazilian ethanol is more-cost effective compared with corn-derived ethanol – sugar cane ethanol yields the best energy balance in production of 8.3 compared with corn based 1.3[1] (energy output/ energy input), and the cost of ethanol production per litre is US$0.18 for sugar cane, compared with US$0.34 for corn based[2]. Furthermore, since Brazilian car engines are designed to run on any mixture of E85 (a fuel mixture consisting of up to85% ethanol and 15% gasoline) or even higher percentages of ethanol, they can better exploit the fuel by using higher compression ratios. The result is that Brazilian ethanol can produce the same number of miles per litre as a car run on gasoline. Also, Brazil's infrastructure enables lower cost of production as much of ethanol production is located within easy reach of ports.

Regarding the criticism that ethanol pushes up food prices, there is very little – if any – hard research to suggest that ethanol production has increased food prices in Brazil.

Finally, and perhaps the most potent anti-sugar cane argument around, some analysts argue that the growing of sugar cane pushes local farmers into using rain-forest land and thus contributing to deforestation and all of its accompanying negative consequences to the environment. This is a feeble argument for three reasons. First, Brazil only uses 4% of its agricultural land to produce sugar cane. Second, the climate in the Northwest – where the Amazon rain forest is located – does not favour sugar cane plants, as it is too humid. Finally, given the large extension of arable land in Brazil, ethanol production can be, and is being, diversified to the North East of the country where it does not affect natural reserves like the Amazon. Moreover, growth in production is also coming from the Sugarcane Genome Program, which has enabled scientists to map sugar cane's DNA, and is thought to lead to higher levels of sucrose from the sugarcane produced in the Northeast.

Although other forms of ethanol have been researched, such as cellulosic ethanol (second generation) there is not enough evidence that suggests it will grow fast and supply world demand. While it is certainly true that cellulosic ethanol would minimise the use of large arable land, the technology for producing this type of ethanol is still in its infancy. The same is true for most other biofuels which range from rapeseed oil to Malaysian palm tree oil. The biodiesel most commonly used is the esters, the most common being the rapeseed oil (RME-Rapeseed oil Methyl Ester) and other blends with sunflower and soya.

Globally, the use of biofuel is growing fast but at this pace it is not enough to overcome the demand for gasoline. However, as the world becomes greener and cleaner, the question is what type of biofuel – ethanol included – holds out the most promise of being as cost-effective as possible. Rapeseed oil, for instance, is rather costly, being more expensive than normal diesel fuel and most types of ethanol.

Policymakers should bear this in mind when they make strategic decisions on which bio-fuels to invest in for the future. Perhaps the coming tour of Brazil in June next year by members of the European Parliament might help contribute to a more well-informed debate on the real prospects of ethanol as a bio-fuel. Sugarcane based ethanol might actually offer Europe and North America an energy alternative which is cheap, clean, and, perhaps most importantly, being produced in countries and regions which are marked by political stability and friendly relations with the West.

[1] It means that for every unit of energy that goes into growing corn in order to produce ethanol, the return is one-third more energy as fuel. The difference for sugar cane ethanol is eight times more fuel for each unit of energy of sugar cane produced. www.ciionline.org

[2] www.fo-licht.com

Microclimates – Top Stories in Energy and Environment

Al Gore Awarded Peace Prize

Al Gore was awarded the Nobel Peace prize in a controversial move. Whilst some praise his contribution to raising awareness of climate change through his Oscar winning documentary 'An Inconvenient Truth' , others question the wisdom of awarding the peace prize to someone whose scientific claims have been deemed 'exaggerated' by the courts.

http://business.timesonline.co.uk/tol/business/law/corporate_law/article2633838.ece

EU to Scrap Biofuel Subsidy

Extra subsidies for planting crops for biofuel in Europe could be scrapped next year after production doubled, the EU's farm commissioner said.

Mariann Fischer Boel said farmers grew 2.8m hectares of energy crops this year. A €90m (£63m, $128m) fund paying out €45 a hectare may no longer be needed because of buoyant demand.

http://www.ft.com/cms/s/0/dab3d34c-7d14-11dc-aee2-0000779fd2ac.html

Renewables Target Shelved?

Britain was accused of being a 'climate spoiler' with speculation that the target to source 20% of Britain's energy supply from renewables by 2020 was being abandoned by Prime Minister Gordon Brown. At present the UK generates less than 5 per cent of electricity from renewable sources. One option to meet the target would be to use biofuels for transport. But to use petrol containing more than 10 per cent ethanol would require modifications to car engines. The other option would be to reclassify nuclear, which does not directly emit greenhouse gases as renewable.

http://www.ft.com/cms/s/0/1d9032f8-81cc-11dc-9b6f-0000779fd2ac.html

Liberalisation Plans Face Court Challenges

EU plans to force full-scale unbundling of energy networks and pipelines were abandoned in favour of a 'two-speed approach' that allows suppliers to own the networks with 'independent systems operators' set up to control access and investments.

However, forced 'unbundling' is still proving controversial, with German energy groups claiming that the measures are unconstitutional and vowing to fight them in domestic courts.

http://www.ft.com/cms/s/0/5f157530-72c2-11dc-b7ff-0000779fd2ac.html

Stockholm Network in the News

This month Stockholm Network energy fellow Paul Domjan had a letter published on ft.com pointing out that the Nobel prize should be given to someone who actively changes the way we deal with an issue, rather than simply raising awareness.

http://www.ft.com/cms/s/0/d969dd2a-7d13-11dc-aee2-0000779fd2ac.html