

A LIBERAL ROADMAP FOR ENERGY TRANSITION

ELDR
ROUND TABLE
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AMSTERDAM





INTRODUCTION

During the past year the Liberal Democrats from the United Kingdom, Centerpartiet from Sweden and D66 from the Netherlands have worked together to benefit from each other's ideas, to share good practices and bad examples but most of all to make energy transition a top liberal priority.

Early February we shared good policy examples, mostly from the local level, during a congress in Linköping, Sweden. Liberal Democrat councillors from Birmingham, Leeds and Manchester joined D66 MP Stientje van Veldhoven and the Mayors of Stockholm and Linköping in a workshop on 'green city development'. Prior to the congress the participants made working visits to Linköping's waste-electricity-water-energy company and the centre for environmental technology. Centerpartiet showed us how a relatively cold city could for a large part run on energy produced from waste. Linköping also proved to be an excellent example of a city that is creating jobs and development by exporting environmental technology.

Almost concurrent we sent a questionnaire to all ELDR members. In addition to the Libdems and Centerpartiet, Yabloko from Russia, Convergencia Democrática de Catalunya (CDC) from Catalunya and Liberal Future Forum from Austria provided us with their good examples, the challenges in the respective countries and ideas for the future. At the end of May the partners and a local councillor on behalf of CDC were joined by experts from the private sector (banking, energy companies and business), academics, think tank and government representatives in a round table meeting in Amsterdam 'A liberal roadmap for energy transition'. You can find the main conclusions of this meeting on page 26.

With this publication we wish to share our findings with you and create a sense of urgency and opportunity amongst liberals. Stientje van Veldhoven shares her thoughts on how liberals should reclaim the energy debate. Sandrine Dixson-Declève discusses the opportunities the switch to a low-carbon future would bring. Gerben-Jan Gerbrandy comments on how the EU can stimulate energy transition. Marijn Bosman presents her concept of fossil fuels as a golden cage. She advocates political courage and setting up a broad cross-sectoral alliance on low carbon prosperity that is good for business, civil society and the environment. Björn Stigson writes about an emerging green race and the business opportunities it brings. Louisewies van der Laan wraps up with questions on how to proceed. Scattered around the publication you will find testimonials from Energy Ministers and green entrepreneurs.

I would like to take this opportunity to thank in particular Lars Nordgren, Mila Eklund and Christian Ottosson from Centerpartiet, Paul Speller and Duncan Brack from the Liberal Democrats and Chris Nicholson from Centre Forum for their valuable contributions. Furthermore we are grateful for the expertise of Jan Wouter Langenberg, Karen Arnon, Maas Goote, Gerben-Jan Gerbrandy, Stientje van Veldhoven and the D66 Sustainability working group. I also want to thank Marijn Bosman who worked as a volunteer for this project, being an excellent organiser and a creative and resourceful colleague. Furthermore my thanks go to the European Liberal Forum, Yabloko, CDC and the Austrian Liberal Future Forum and all others who contributed to the project. The commitment of ELDR Vice-President Louisewies van der Laan proved invaluable and her enthusiasm was inspiring. Last but not least I thank the ELDR for its generous support for this project. We trust that this project and its results can serve as an excellent starting point for next year's theme. ■

ELDR PROJECT A LIBERAL ROADMAP FOR ENERGY TRANSITION

BY D66, CENTERPARTIET
AND THE LIBERAL DEMOCRATS



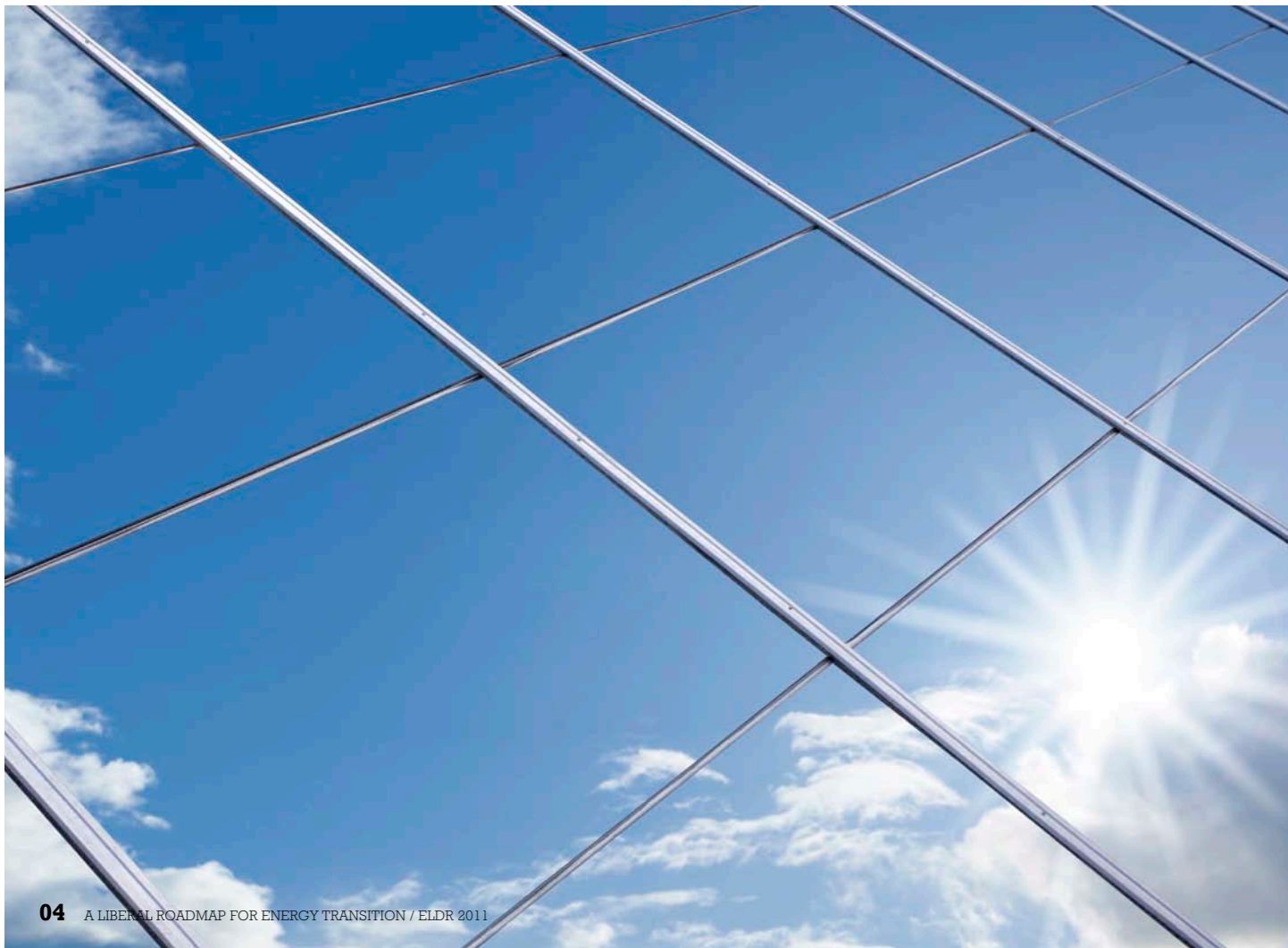
CONTENT

ELDR PUBLICATION / NOVEMBER 2011

- 04 LIBERALS SHOULD RECLAIM THE ENERGY DEBATE – JOINTLY!**
STIENTJE VAN VELDHOVEN
- 06 LOW CARBON PROSPERITY: IS EUROPE READY FOR THE CHALLENGE**
SANDRINE DIXSON-DECLÈVE
- 09 ENERGY TRANSITION: FROM AN ECONOMIC PERSPECTIVE**
CHRIS HUHNE
- 10 HOW CAN THE EU STIMULATE THE ENERGY TRANSITION**
GERBEN-JAN GERBRANDY
- 12 Q-BOX ENTREPRENEUR**
IGOR KLUIN
- 13 THE NETHERLANDS GETS NEW ENERGY**
MARCO WITSCHGE
- 14 STUCK IN OIL**
MARIJN BOSMAN
- 17 ENERGY TRANSITION: FROM AN ENVIRONMENTAL PERSPECTIVE**
LENA EK
- 18 BUSINESS OPPORTUNITIES IN THE 'GREEN RACE'**
BJÖRN STIGSON
- 22 EU COMMISSION ROADMAP FOR MOVING TO A COMPETITIVE LOW CARBON ECONOMY IN 2050**
FACTS & FIGURES
- 24 A LIBERAL ROADMAP FOR ENERGY TRANSITION?**
LOUSEWIES VAN DER LAAN
- 26 RECOMMENDATIONS ELDR ROUND TABLE**
- 27 PHOTO REPORT ELDR ROUND TABLE**



LIBERALS SHOULD RECLAIM THE ENERGY DEBATE **JOINTLY!**



The ongoing liberalisation and integration of the European energy market has generally been a success. Consumers can choose between several competitors, security of supply has been good, geopolitical independence is on the political agenda, and European leaders have agreed clear goals for the reduction of CO2 emissions, for sustainable energy production and for energy efficiency by 2020.

These targets reflect the consensus that Europe needs to develop a new sustainable economy, based on clean, renewable energy and the efficient use of energy and resources and reduced dependence on fossil fuels.

So far we all agree. We share a common destination. Yet we differ largely on the way to get there. Between different liberal parties within countries, and across national borders. Ultimately, this fragmentation hampers our chance of securing our goals: mitigating climate change and environmental impact; creating jobs; and securing Europe's future energy supplies.

4 REASONS WHY LIBERALS SHOULD GET STUCK IN

Firstly, the freedom we enjoy today should not deprive future generations of the same privilege. Science tells us we must do much more if we are to ensure that future generations do not suffer more than 2 degrees of global warming, along with the losses in prosperity and liberty this entails. Current climate change and energy policies are not enough to avoid this.

AS LIBERALS,
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The price will ultimately have to be paid, individually or collectively. As liberals, we should recognise that the market is failing: failing to make the polluter pay. To change things, we should strive to create the right incentives, for example by shifting taxes from labour to pollution to avoid a competitive disadvantage in the global market. Also, in choosing solutions, we must look ahead. How much biomass can be burnt before we enter a competition for land use? How scarce are the materials used in generating alternative energy, and where will we find them? Which are our preferred transition fuels?

As our energy bill rises, the financial case for reform strengthens further. Today's investment decisions will lock in our fuel mix and energy use for the coming decades. Incentives to invest in efficiency and sustainability now can therefore translate into large savings in the future. In many countries, liberals are justly proud of a reputation for tough but fair stewardship of the national finances. There is every reason to extend this thinking to energy policy.

Third, the internal market for energy is handicapped when it comes to renewable energy. Even on a strongly integrated North-west European market, energy companies and entrepreneurs face a disharmonised and fragmented web of national targets and fiscal regimes. This is counterproductive, costly and stifles effective and efficient competition. Ultimately, Europe will benefit from a more liberalised market where renewable energy is produced under the best conditions on a level playing field. Of course this market will never exist without an optimised international (smart) grid.

Finally, there are fundamental market distortions that need to be ended. The International Energy Agency and the G20 leaders at the Pittsburgh summit recognised this, in particular the continuing presence of subsidies for the use of fossil fuels. Lower prices for specific users or industries are both unfair and inefficient, as they give a perverse incentive to use more energy than elsewhere in the economy, leading to a net loss in welfare for society. Also every Euro spent on subsidizing fossil energy, means the ongoing need to spend at least 1 Euro- on sustainable energy to offset a (further) negative effect on the level playing field. In a time where public money is scarce, it would make sense to cut on both.

FUEL FOR THOUGHT

Energy fuels the Internal Market. So ultimately, energy policy should not remain a national preserve, but become a European priority. Consumers, businessmen and governments will benefit from free flowing, fairly priced, clean energy. Reasonable people can disagree on the best way to get there. But if we continue with a fragmented approach, we are likely to miss the turnoff to the best path leading to our common destination.

Liberals should think about and discuss a common agenda. That's why D66, together with Centepartiet and the Liberal democrats has chosen to put this subject on top of the ELDR agenda in 2012. I look forward to exchanging visions, ideas and solutions with you next year! ■

SANDRINE DIXSON-DECLÈVE

DIRECTOR OF THE PRINCE OF WALES'S EU CORPORATE LEADERS GROUP ON CLIMATE CHANGE AND BRUSSELS OFFICE, UNIVERSITY OF CAMBRIDGE PROGRAMME FOR SUSTAINABILITY LEADERSHIP

UNIVERSITY OF CAMBRIDGE

THE PRINCE OF WALES INTERNATIONAL BUSINESS LEADERS FORUM

LOW CARBON PROSPERITY:

IS EUROPE READY FOR THE CHALLENGE?

EU decision makers are in the midst of a controversial low carbon debate, the outcome of which will shape the EU's policy and economy for many years to come. The debate is split between those not yet convinced of the green growth agenda and the feasibility of reducing emissions whilst growing the economy, versus those that believe a low carbon economy will help us exit the recession and bring greater growth and jobs to Europe.

Since 2008, greater attempts have been made to address climate policy across European legislation through the climate and energy package. In January 2009, the creation by Jose Manuel Barroso, President of the European Commission, of a new Directorate General allocated solely to Climate Change, reflected the political realisation that climate change deserved as much attention in policy making as other areas. However, as Connie Hedegaard observed upon accepting the new post of European Commissioner for Climate Action, the challenge would be integrating the risks and opportunities from climate change across European policy, from competition and industrial policy to agriculture and energy. Only through comprehensive mainstreaming would the EU then meet its 2050 GHG reduction goals of 80-95% whilst ensuring sustainable growth and competitiveness on a global market.

The Commission's first attempt at mainstreaming is *Europe 2020*, its new vision focused on smart, sustainable and inclusive growth. The premise for the 2020 Strategy is that sustainability and growth are not mutually exclusive and that policy which stimulates 'green growth', resource efficiency and a low-carbon economy will deliver both a more vibrant and globally competitive European market and ultimately a better society for Europe's citizens. President Barroso himself

has commented that these areas 'are the key to repositioning Europe for the new markets of the 21st century, new areas of growth, and new jobs for Europe's citizens' – a perspective which was reinforced by the Commission's publication of the 2050 Low Carbon Roadmap in March 2011.

The 2020 Strategy includes seven flagship initiatives, three of which are directly linked to sustainability and low carbon growth. The first initiative, launched in February 2011, focuses on 'a resource-efficient Europe', and is intended to help achieve the mainstreaming and cross-cutting policy goals needed to make sustainability a reality. If successful, it should make resource efficiency the common denominator for climate change, energy, transport, industry, raw materials, agriculture, fisheries, biodiversity and regional development. In true de-coupling fashion, Europe's economic performance would be boosted while reducing resource use and GHG emissions. Past experience has already shown that this is possible: 2009 figures indicate that, since 1990, Europe's GDP has grown by approximately 40% and its manufacturing output by 30% while GHG emissions have decreased by 17.3%. The recession has of course assisted in the reduction of GHG emissions by slowing growth, but the overall trend since 1990 remains a reduction in emissions combined with a steady increase in GDP.

In essence, some of Europe's policy makers are starting to believe that industrialisation fuelled by environmental degradation and carbonisation is no longer necessary, and that the creation of a low carbon, resource efficient economy would create fresh opportunities for growth and innovation. It would also ensure the security of supply of essential resources, at a time when competition for these resources is growing fast.



THE LONGER WE WAIT, THE HIGHER THE COST WILL BE... AS OIL PRICES KEEP RISING, EUROPE IS PAYING MORE EVERY YEAR FOR ITS ENERGY BILL AND BECOMING MORE VULNERABLE TO PRICE SHOCKS

Commissioner Hedegaard



Most importantly, these policy makers are increasingly joined by business leaders convinced that 'green growth' would maintain the EU's global competitiveness, which is slowly being eroded by greater investment in new markets such as China and India.

However, such a position is still not mainstream within European governments and businesses: for some, this new focus on resource efficiency and low carbon is a real threat to industrialisation, to economic growth, and to their way of life. Not all policy makers and business leaders are convinced that such a positive depiction of de-carbonisation is accurate, believing fundamentally that industrialisation cannot be de-coupled from GHG emissions; thus de-carbonisation means sacrifice and stagnation.

For example, Commissioner for Energy Günther Oettinger, openly declared his concerns to *The Guardian* newspaper during the run-up to the launch of the Roadmap: 'If we go alone to 30%, we will only have a faster process of de-industrialisation in Europe... I think we need industry in Europe, we need industry in the UK, and industry means CO2 emissions.' This view echoes those of policy makers across Europe and representatives from energy-intensive sectors who do not believe the EU should move beyond its existing commitment of 20% GHG reductions by 2020 until other countries such as the US or China set similar targets.

As well as believing that industrialisation and growth will always increase GHG emissions, that de-coupling is not feasible, and that de-carbonisation will affect Europe's market

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share and jobs, many energy-intensive industries claim that, without similar commitments from the US and China, stronger European targets would lead to 'carbon leakage' – the loss of business to outside competitors. These opponents include many in the steel, cement and paper industries, as well as in fossil fuels.

Yet many key leaders believe that de-carbonisation is the right policy for Europe. The day before Commissioner Oettinger's frank exchange with *The Guardian* President Jerzy Buzek of the European Parliament hosted a Low Carbon Prosperity Summit, co-organised by the Prince of Wales's EU Corporate Leaders Group on Climate Change. President Barroso declared at the meeting: 'What we are all involved in here is a race to the top. Building a low-carbon future for Europe is not a step backwards as some suggest, it is and can be a business-friendly and competitive agenda as well. I am convinced that our efforts will lead to greater prosperity, with businesses reaping the benefits of greater resource efficiency and first-to-market advantages in cutting-edge innovation.'

At the Summit, world renowned economists Lord Nicholas Stern and Professor Ottmar Edenhofer upheld the growth message, both speaking of the urgency to address climate change not only because of environmental impacts but most importantly because of the direct impact on Europe's economy. Not seizing the opportunities from a new, low-carbon industrial revolution would cause a loss in jobs and growth, not the reverse. Lord Stern stated that 'The case for urgent action is not just powerful, it's also attractive,' pointing to countries which understand this message, such as China. A case in point is the new Chinese Five Year Plan (2011-2015), which focuses on green growth and clean technology, with directives aimed at reversing the damage done by 30 years of unrelenting growth, and the explicit decision to stall growth for the first time in history by maintaining a lower than expected GDP while investing in clean and renewable energy. China's Environment Minister Zhou Shengxian, has commented that 'the depletion, deterioration and exhaustion of resources and the deterioration of the environment have become serious bottlenecks constraining economic and social development.' Effectively, China, the world's biggest source of greenhouse gases, has put low carbon prosperity at the top of its agenda.

The Low Carbon Prosperity Summit uniquely convened the Presidents of the European Commission, Council and Parliament, The Prince of Wales, and economists, investors and business leaders. In doing so, it demonstrated for the first time the possibility of a broad, cross-sectoral alliance on low carbon prosperity as a strategy that is good for business, civil society and the environment. Participants confirmed the need to formulate more ambitious short, medium and long term timetables and targets, as well as stronger policy frameworks to revolutionise our industries cost-effectively. Most importantly, it was recognised that such a strategy demands political courage.

Commissioner Hedegaard has proved a worthy champion of the cause, also pointing to the financial implications of delaying action towards a competitive low-carbon economy: "The longer we wait, the higher the cost will be... As oil prices keep rising, Europe is paying more every year for its energy bill and becoming more vulnerable to price shocks." Her

position is reinforced by the Low Carbon Roadmap which confirms that domestic emission reductions in the order of 25% in 2020, 40% in 2030 and 60% in 2040 would be the most cost-effective pathways, when complemented by energy efficiency measures and the setting-aside of allowances under the ETS. For the first time, the Roadmap also addresses sectoral responsibilities and sets out the short and mid-term milestones needed in individual sectors to meet the 2050 GHG emissions target. Clearly, one of the main challenges will be reaching the power sector milestone of 54-68% by 2030, in order to decarbonise the sector almost entirely by 2050.

Responses to the Roadmap have been mixed. Business Europe, the main European business association, refused to support the suggested 25% emissions reduction for 2020 until China and the US promote similar action. However the association is open to considering possible GHG targets in 2030 and 2040. At the other end of the scale, NGOs and politicians representing the core governments supporting stronger action have complained that the Commission was not going far enough and should immediately adopt a unilateral target of 30% GHG emissions reductions by 2020 before setting milestones for 2030 and beyond.

This reminds us of the daunting feat ahead. Without a doubt, this is the most complex challenge we have faced since the Industrial Revolution. It is all the more difficult to address in the midst of a recession, and at a time when climate scepticism still reigns in some business quarters. Embracing a low-carbon and resource-efficient economy means seizing new opportunities from clean technology, and driving change across all business sectors. It also calls for greater cooperation between sectors, and offering concrete solutions to those sectors and countries most impacted by de-carbonisation.

How this will play out hinges on the willingness of European policy makers and business leaders to collaborate, provide genuine leadership and develop the best regional strategy forward based on the EU's 2050 Roadmap. The crucial question is whether EU policymakers will concede their current leadership position, and surrender to those sectors and EU Member States that are not ready to seize the challenge – or whether more political courage can be gleaned from within the various departments of the European Commission and in the halls of Europe's main capital buildings to confront opposition both to stricter EU targets and similar efforts outside the EU. Clearly a positive outcome at the UNFCCC negotiations on climate change being held in Durban this December will strengthen the Commission's position at home. We can only hope that by then Europe's Ministers will agree that low carbon prosperity is the right growth strategy for Europe, and that emerging economies such as India and China start to move in a similar direction and sign up to an international framework deal. ■

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ENERGY TRANSITION FROM AN ECONOMIC PERSPECTIVE

The urgency of the climate challenge is reason enough for an energy transition to a low-carbon future. But that is not its only justification. The investments needed to build a low-carbon economy and reduce greenhouse gas emissions will provide a much-needed boost to our ailing economies.

Recovery from the great recession of the 1930s was not led by the old industries like textiles, iron, coal and shipbuilding. It was unleashed by new enterprises: cars, electrical appliances, light manufactures. It will be the same in this recovery from deep recession. Our economic success will depend on the industries of the future, not the past. Energy efficiency, renewable energy infrastructure, carbon capture and storage, electric vehicles and other low-carbon technologies will be a strong driver of growth, creating new industries, jobs and export opportunities. These are all sectors expanding on a global scale faster than the average for the world economy, and provide Europe with a huge opportunity for change.

Furthermore, these investments are particularly important when the prices of the fossil fuels the European economy still depends on – oil and gas – are high and volatile, and domestic production is declining. They can help the European economy get off the oil and gas hook, and break the chains tying pollution to progress. A low-carbon economy will be more efficient, more competitive, and more resilient.



RT HON CHRIS HUHNE
MP, SECRETARY OF STATE FOR ENERGY
AND CLIMATE CHANGE, UK



HOW CAN THE EU STIMULATE THE ENERGY TRANSITION?

Speeding up the energy transition is necessary from an environmental, economic and geopolitical point of view. We have no option but to move towards a green economy. A rapid transformation will give Europe a huge competitive advantage. It is therefore in the EU's interest to speed up this transformation.

How to move towards a green economy is a European question. Member States will become more and more dependent on each other. Renewable energy sources such as wind and solar power will make up an increasing share of the European energy mix. Because the wind does not always blow and the sun does not always shine, we must work together. Solar energy from Portugal or Spain can be used in Northern Europe when there is no wind, and vice versa. Respondents to the ELDR survey conducted in spring 2011 all see an important role for the European Union in stimulating innovation, creating a single energy market and establishing a stable and equal level playing field.

According to the latest European Commission calculations, the transition to sustainable energy will cost about €000 billion between now and 2020. This money will have to come primarily from private investment, but must be facilitated and encouraged by public expenditure. However, at this moment one percent of global GDP is spent on fossil-fuel subsidies. These environmentally harmful subsidies have a very negative effect on the transition. They cost us, and the tax payer double: we first pay the subsidy and secondly we have to pay to resolve the negative environmental consequence. In order to speed up the transition towards sustainable energy Europe will have to eliminate these perverse stimuli and spend this money more wisely on research, new technology and infrastructure. In the Netherlands alone, € - € billion is spent each year on subsidies for polluting small commercial vehicles.

Emerging economies are already investing heavily in sustainable technologies. In a recent study, the World Economic Forum and the Boston Consulting Group even talk about the 'new sustainability champions'. In these emerging markets, companies grow rapidly under the highest environmental constraints and stresses, thanks to awareness and innovation. EU Member States will have to stimulate research in sustainable technologies. Without sufficient knowledge resources, we shall be no match for these emerging economies. The EU should therefore supplement Member States' efforts to place innovation and research on the agenda and back them up with serious financial resources. Innovation is the distinctive element in global competition. All ELDR survey respondents agreed on the crucial role for innovation and mentioned innovation policy for energy in their election programme for their latest elections.

In order to stimulate innovation in energy technologies Europe needs predictable and stable policies. Respondents to the ELDR survey indicated that stop-and-go approaches and sudden cuts in subsidies have proven to be disastrous for research and development. Several European companies that developed innovative solutions were unable to survive in the European investment climate. Some of these companies were moved to China, where they now put their products on the market. Europe needs a predictable policy, such as the German feed-in tariff system, that provides the necessary long term securities.

A further reorientation of the burden of taxation could also contribute to creating the right investment climate. A shift in taxation from labour towards environmental taxes will boost employment and increase the share of environmental taxes in public revenues. Our ageing society will also make it necessary to shift taxation away from labour. In Sweden energy taxes have been used as an important tool in the energy

policy for a long time. Taxes have been imposed on electricity and fuels for several decades. The current energy taxation policy is aimed at improving the efficiency of energy use and encouraging the use of biofuels, but it is also directed at creating incentives for companies to reduce environmental impact and create favourable conditions for renewable electricity.

An efficient European energy market is also of paramount importance. A single EU gas and electricity market with fair competition will contribute to lower prices and innovation. Europe needs better implementation of current legislation and enhanced cooperation.

As our current pattern of energy production and energy use sets our possibilities for the coming decades, it is key to develop long term European objectives. All respondents of the ELDR survey supported the idea of such binding European objectives. Not only do they indicate the level of effort and change that is required, they also provide certainty amongst investors, governments and citizens. Acting now will avoid costly adaptations in the coming decades.

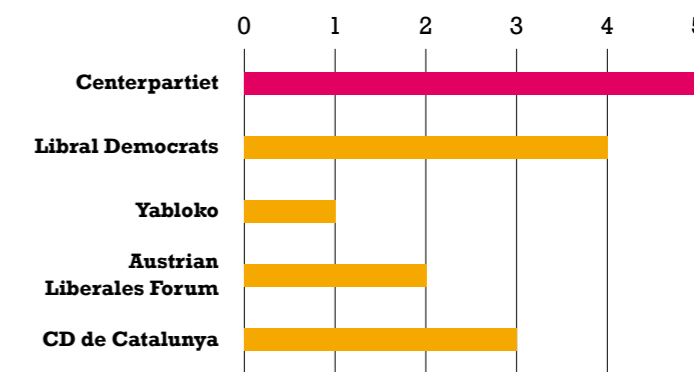
However, achieving ambitious targets for renewable energy and energy efficiency also depends on the availability of the appropriate energy infrastructure. The timing for establishing the necessary infrastructure can be decisive for the amount of renewable energy we use. In most European countries the energy networks date back to the '60s and '70s. These outdated grids are made to transport electricity from large power plants to the energy users. The transition to clean energy, however, requires flexible networks, so called 'smart grids' that can deal with a fluctuating energy production.

All parties that took part in the ELDR survey are aware of the enormous challenge that lies ahead of us, but not all of them

A SHIFT IN TAXATION FROM LABOUR TOWARDS ENVIRONMENTAL TAXES WILL BOOST EMPLOYMENT AND INCREASE THE SHARE OF ENVIRONMENTAL TAXES IN PUBLIC REVENUES

are equally satisfied with the climate and energy programme in their country. On a scale from 1 to 5 the liberal parties rated their degree of satisfaction, with 1 being very dissatisfied.

**DEGREE OF SATISFACTION
CLIMATE & ENERGY PROGRAMME
POLITICAL PARTIES IN OWN COUNTRY**
scale 1 to 5, from low to high satisfaction



The EU cannot replace national efforts in speeding up the energy transition, but the EU can set the right European framework for national policies in order for them to be more effective. An European approach to the energy challenge will speed up the transition towards a green economy, increase Europe's competitiveness and increase the security of energy supply. But it is not all long term policy. We should have started yesterday with a very ambitious energy efficiency programme. A 1% reduction of electricity consumption in the EU saves 50 power plants or 25.000 wind turbines. How much stronger arguments do we need? ■

IGOR KLUIN Q-BOX ENTREPRENEUR

Igor Kluin is the entrepreneur behind the Q-box. The Q-box is a device that connects people who generate (sustainable) energy in a local network. It calculates the quantity of generated energy and can redirect energy to places that need it at that point in time, for example because someone is using the dishwasher. To generate energy locally has great benefits. Firstly it is much more efficient because 60% of centrally generated energy is wasted in generating and transporting it. Secondly, it is much cleaner than gas or coal-generated energy and lastly people are more conscious about their energy use and therefore more economical.

Kluin used to be working in the marketing and advertising sector until he watched a documentary about hydrogen-based energy. This he states 'was a turning point'. Furthermore he is triggered by the challenge to make the transition to more sustainable energy production. Igor Kluin: 'Traditional energy companies are suffering from outdated market thinking and in the near future the energy market will have to deal with more and more outsiders. Now that people can generate their own energy, they obtain a position of power. Energy will change from being an expenditure with little choice, to being the subject of a real choice: power to the people'

When asked about the available green technologies, Kluin is optimistic: 'the technologies are there, at most they will become cheaper through mass production and further developments. The drive to make cleaner cars or using renewable sources of energy has been absent: fuel has been cheap and externalities were not visible enough. This will change in the coming years. However, psychology, for now, is even more important than technology. The biggest challenge will be to make people change their ways. The bottom line is to acknowledge that the choices people make are made in the context of people's needs and possibilities. And we are talking about the selfish, crude person – not the elite politically correct person.' ■

THOSE WHO
EXCEL ARE NOT
NECESSARILY
SMARTER,
BUT THEY
START RUNNING
EARLIER

MARCO WITSCHGE
DIRECTOR 'THE NETHERLANDS GETS NEW ENERGY'
FOUNDATION

THE NETHERLANDS GETS NEW ENERGY



'The Netherlands gets new energy' is an initiative by experts from seven political parties. This was the first time in decades that experts from across the political spectre, from left to right, progressive and conservative joined hands and call for action. The foundation pleads for ambitious measures to make the Netherlands run on sustainable energy in 2050.

The strategy drafted by the foundation is called a new 'Deltaplan'. This title refers to the comprehensive programme that was set up to protect the Netherlands from sea and river flooding after the 1953 North Sea flood disaster. The initiators of the Deltaplan identify a lack of urgency regarding the energy situation in the Netherlands. A Deltaplan should create just that. The fact that a cross-party initiative calls for cross-department cooperation and ambitions should also raise awareness and foster political will.

What is the most pressing condition for innovation in effective energy transition?

There is no 'silver bullet', but it should rather be an intelligent mix of complementary conditions:

- Taxes based on the polluter pays principle
- Government guarantees and fiscal incentives for private investments in energy efficiency and sustainable energy
- Government subsidies for key innovations that will be crucial to our affordable, reliable and sustainable energy system

- A solid, efficient and intelligent energy infrastructure easily accessible for decentralized sustainable energy
- Law: strict technology norms within fair terms

What should be the role of government in this matter?

The government has several roles in this matter:

- Market manager: safeguarding healthy competition in a fair level playing field
- Market developer: stimulation of key innovation and industries
- Infrastructure developer: not only electricity and gas infrastructure, but also transport
- Launching customer
- Law maker

However: the challenge of the energy transition is so extraordinary, that a far more ambitious master plan approach role is needed to accelerate energy transition. Comparable historical transformations such as the US Arsenal of Democracy in World War II, the Marshall Plan and the Apollo Project all shared that they were successful because a clear stimulating vision, smart government planning and free market dynamics did not exclude but complete each other. Despite the immense investments that were needed in the historical examples mentioned, they all led to an accelerated economic growth because of incentives for new technologies, products, markets and jobs. All examples started with the formulation of the right clear ambitions that inspired and motivated the whole society. ■



STUCK IN OIL

ALL FREE MARKET RHETORIC ASIDE: THE GOLDEN CAGE OF TRADITIONAL ENERGY SUPPLY

That our traditional sources of fuel are limited is widely acknowledged. Still, transition to sustainable energy supply is not easily done. Producers as well as consumers live, drive, warm and light fairly comfortable with the traditional fuels. The perceived comfort of traditional energy is like a golden cage, which people can and should escape from.

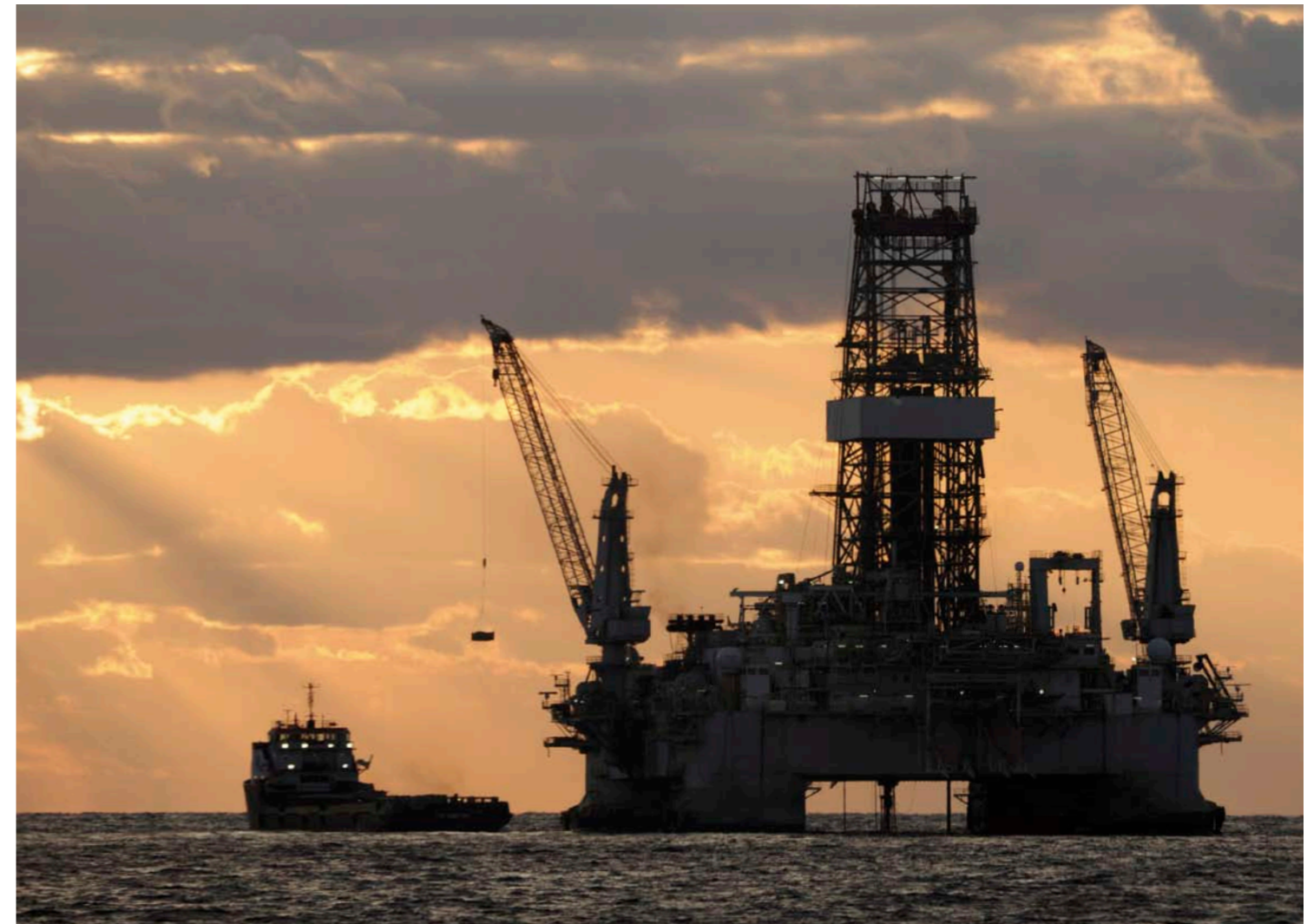
'Nuclear energy is provable dangerous, safe, clean, polluting, cheap and expensive – all at the same time', writes Rob Wijnberg the chief editor of the Dutch newspaper NRC Next on 26 April 2011. The article was written right after the earthquake in Japan, which badly damaged the nuclear power plant in Fukushima and fuelled the nuclear energy discussion once again.

In his article, the chief editor reflected upon the nuclear energy question. He concluded that the discussion takes place in the wrong sphere and that it should touch different topics. Instead of a technological 'he-said-she-said'-discussion, he would much rather like to see a debate on the kind of society that we strive for. And the energy system that is part of that ideal society. In the article, Wijnberg challenges his readers to picture a world in which we switched to solar panels, windmills and biogas. According to Wijnberg, the question where it all breaks down to is: 'Do we want a society dominated by slow and bureaucratic governments and big money or do we want a society that liberates us from exactly that?'

In this article I elaborate on his question by exploring the current situation of energy supply in the world, and the policies taken in order to transit to sustainable supply. I will clarify the structures of power and regulations, and use European and Dutch examples to illustrate these structures. Subsequently I will explain how these measures are built on the logic and interests of the traditional system. These measures barricade the door for transition to a radically different system of energy supply: a system in which people, either as consumers or as producers, play a much more dominant role.

FEW PLAYERS, BIG POWERS

Globally, more than 85% of our energy supply comes from fossil fuels. Coal, gas and particularly oil shape our daily lives. Our countries are full of electricity cables, oil rigs, pipelines and refineries. Oil derivatives are the resource for countless materials, like asphalt, kerosene, benzene, plastics and lpg (autogas). The dependence on these resources increases as the world population grows and its wealth progresses. Not only in China and India more people own and drive cars, but the number of cars in most European countries has also grown steadily in the past years. On top of that, despite the fact that household appliances have grown far more energy efficient, the average energy use per households still grows every year. Energy-related carbon-dioxide (CO₂) emissions in 2010 were the highest in history, according to the latest estimates by the International Energy Agency (IEA). Research of Dutch news-



paper the Volkskrant (1 June 2011) underlines this, showing that despite the European reduction goals, Dutch companies emit 13% more CO₂ in 2010 than in 2009. Concluding, the whole infrastructure of the modern world is accommodated to fossil fuel: we not only drive our vehicles with it, we warm our houses with it, and generate our electricity with it. And our use and therefore dependency grows and grows. We are stuck.

Foreign Affairs magazine estimates that no industry spends as much on lobby in Washington than the energy industry. This is not surprising, as there are six energy companies among the ten largest economies in the world (36 of the largest economies are not countries, but multinationals). The decision making power of this small group of companies reaches far. It decides on war and peace in oil rich regions like Iraq. It represents crucial interests regarding the intervening in violent conflict (Libya: yes, Syria: no). Oil and gas companies are prime income source for Arab authoritarian regimes and American presidential candidates. Our energy supply is thus shaped by only a limited number of players on the market. Those six oil companies and a number of countries and state-owned companies pull the strings. Together, there are no more than 500 owners who decide how much energy, for whom, when, and for which price is available on the market worldwide. All free market rhetoric aside, our traditional world of energy supply is thus built up as a strongly hierarchic, untransparent and centralized system, keeping innovation outside and traditional interests in place.

EUROPEAN POLICY

Not only does oil make us dependent on a small group of owners, its limited supply is ending and the use leads to all kinds of environmental issues. We therefore need an alternative solution. From left to right there is public acknowledgement for that view. So far so good. The EU policy for environment and climate has set goals for 2020 at a 14% supply from sustainable energy sources and a 20% reduction of CO₂ emissions. Most European countries are far behind reaching that target (the Netherlands is currently on 4%). Time for action!, new policies!, a sense of urgency!, is what I would think. But here too, we seem stuck. We are stuck in the regulations that protect the established power of the traditional energy industry.

As a specific measure to stimulate companies to reduce their emissions, the European Commission has set up the Emission Trade System (ETS). This system implies that every company receives rights (for free) to send a certain amount of emissions into the atmosphere. The size of the emission rights is based on the expected emissions, estimated by the companies themselves. Therefore, according to the logics of the ETS, the heaviest polluters receive the largest amount of rights for their emissions. The International Energy Agency (IEA) recently showed in a report that in 2010 the large industrial companies such as Shell and steel concern ArcelorMittal (these companies were responsible for the largest amount of emissions in the world) saw their emissions increase. A company may also

GLOBALLY, TRADITIONAL ENERGY SUPPLY RECEIVES ABOUT TEN TIMES AS MUCH GOVERNMENT SUPPORT THAN RENEWABLE ENERGY DOES

buy the rights at an auction. This appears to be a transparent mechanism of supply and demand. However one can imagine that when dealing with some of the largest economies in the world, an auction is not a fair public sale. As the heaviest polluters receive the largest amount of rights for their emissions, there is no reward in a conscious energy policy for companies. Concluding, even a policy measure that is aimed at the stimulation of sustainable use of energy, may unintentionally facilitate advantages for the established industry of traditional energy.

NATIONAL POLICIES: THE CASE OF THE NETHERLANDS

One could think that the EU is a large institute, and that it would be easier to realise policy renewal on the national level. But as I explain in the case below, energy transition on the national level appears to be all but simple.

Roughly it is estimated that globally, traditional energy suppliers receive about ten times as much government support than renewable energy. In the Netherlands, government measures exist that directly go against the goal of a sustainable energy supply with less CO₂ emissions. A recent report from Ecofys (a consultancy firm) concludes that the Dutch government supported the end use of energy (dominated by traditional fuels) in 2010 by € 4.6 million, for example by tax discounts and tax exemptions for high-end users of energy. It is important to add that the Dutch tax system is set up according to degressive logics: the more energy you use, the lesser energy tax you pay for it. Also regarding production of energy, (a little) more government money was put in fossil fuels and nuclear energy (almost € 1.4 million) than in renewable energy sources (€ 1.3 million). That does not make sense, as new techniques often make extra costs to set up their infrastructure. For example, wind energy at sea is relatively expensive since offshore wind turbines have to pay for their connection to join the electricity grid, whereas coal plants do not have such additional costs. Shocking? In 2010, Dutch government

spend € 5.8 million from their government budget to fossil energy against € 1.5 million to renewable energy.

Policy renewal to enhance innovation in the energy sector therefore seems inevitable. Dutch Minister for Economic Affairs and Innovation, Mr Maxime Verhagen, identifies ten 'top sectors'. For each top sector one 'captain' is appointed. It is remarkable that out of the ten captains, two of them have a background at Shell: the captain of the top sector Chemistry and the captain of... Energy. Mr Jeroen van der Veer (captain for Energy) is famous for his 'sense of perspective' regarding the urgency for energy transition. In a TV-show, when asked for his take on the prognosis that in 2050 nearly half of the energy would be generated from sustainable sources his reply was: 'The demand for energy keeps on rising, therefore 30% of the energy provision generated from sustainable sources is what is maximum feasible'. In other words: he foresees a continuation of our dependency of fossil fuels in the future and he is fine with it. That makes Jeroen van der Veer a peculiar choice as a sector figurehead, put in place to push forward an innovative energy industry in the Netherlands. Minister Verhagen initially even stated that he was not planning to report to the Dutch parliament about his progress regarding the European reduction goals. Reporting would imply to much of an 'administrative hassle'; when 2020 would come, we would see the results by their own accord. The responsible minister being long gone by then.

RESPONSIBILITY FOR THE NEXT GENERATION

The current energy supply is like a Golden Cage: it appears to be difficult to shift to a radically different, transparent and sustainable system with an important role for individual self-determination of individuals. A small group of players obstructs the sustainable transition (since it runs counter to their interests), and existing regulations and subsidies hardly spur energy companies and consumers with the incentives to change their production and use in a sustainable manner. The forces to change this, are not (yet) strong enough to successfully challenge these powers: it is hard for the younger generation, the current electorate, to empathize with the challenges of the future. On top of that, our democratic system is not aimed at the stimulation of public and private decision makers to take the next generation into account. The same goes for the accountability of the decisions that were made during a past era: Minister Verhagen will probably not be a minister in 2020, when the result of his policy will become clear.

But how can we escape from this golden cage? Part of the solution lies in greater transparency of government administration. Obviously, the first thing to do is to set aside the perverse policies that trouble the fairness of the energy market: no more financial stimulation of fossil fuels. From another Dutch example, it appears that government 'non-intervention' may also contribute to the attractiveness of renewable energies. As a matter of fact, now that the subsidy for private persons for sun panels has been stopped by the Dutch government, the sales of sun panels appears to have risen. Entrepreneurs who sell them stated that they would only expect a rise of orders for their products. They assume that now – without government intervention – people know what they can expect to pay for it, what the returns will be and how long a return on investment will take. The increasing consciousness of people who do take

responsibility for the world of the next generations leads to the rise of countless citizens initiatives, in which citizens in cooperation with local companies generate their own (green) energy. For example, in the Netherlands there is a group of farmers, who have gathered in a consortium to build a windmill park. Another example are 'local energy companies' in various Dutch cities, set up as a cooperation and therefore owned by their members. The character of renewable energy supply without big powers and untransparent bureaucracy makes it controllable, verifiable and predictable for every individual. That is the kind of society I strive for. ■

IT APPEARS THAT IT IS DIFFICULT TO TRANSIT TO A RADICALLY DIFFERENT, TRANSPARENT AND SUSTAINABLE SYSTEM

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ENERGY TRANSITION FROM AN ENVIRONMENTAL PERSPECTIVE

Too often the efforts to mitigate climate change have been described as a balance between economy and environment. Terms such as 'burden sharing' has long been commonplace in the debate and action on climate has regularly been described as an expense. But while the financial crisis has lowered the cost of ambitious environmental goals, economic research shows that a green shift would actually carry enormous economic benefits.

Much of the environment policy is about finding momentum for development and change. Politicians should and must formulate goals and limits. But we must also devote energy to the task of stimulating action and finding the right instruments to create the dynamics that lead to sustainable development. Above all, it's about doing work on climate change in the everyday lives of businesses and people.

Smart and modern environmental technology takes its starting point in the economic insights about how people and businesses operate. The closer a policy is to imitate how markets' function, the greater the possibilities for change.

Being environmentally friendly should be easy, cheap and fun.



LENA EK
MINISTER OF ENVIRONMENT
SWEDEN



BUSINESS OPPORTUNITIES IN THE GREEN RACE

The Fukushima disaster and the German decision to stop nuclear power has triggered a debate around energy sources. Current discussions are highly emotional and lack the facts about technology options, supply and demand of fuels and capabilities and costs for alternative energy infrastructures.

Yet, looking at where we are today, it is clear that a number of the leading economies do not have 'real' energy plans for the medium to long term in place. They also have different agendas. Emerging economies are focused on reducing poverty and improving living standards, not the least to maintain social and political stability. On their part, developed countries are looking for ways to decouple economic growth from energy consumption.

WHO IS DECIDING
THE TRADEOFF
BETWEEN NATIONAL
ENERGY SECURITY
AND POTENTIAL
ENVIRONMENTAL
DAMAGE?
AND WHO WILL PAY
THE BILL IF THERE IS
A PROBLEM?

This situation will inevitably lead to a push for more energy efficiency. However, market forces alone are not strong enough to drive substantial transformations within a reasonable timeframe in major energy-related sectors like buildings, land transport and electricity generation and distribution. Such transformations require supportive government regulations and incentives that catalyze actions through the provision of financial and technological assistance.

All this tells us we need to find a new model for a better functioning cooperation between governments and business that can facilitate enabling regulation. Further, as the main source of capital and innovation, business needs to be more active in the societal debate on how to transform the global energy system and develop a low-carbon economy.

WHOSE RESPONSIBILITY IS IT?

Against this background, it is important for business to clearly express what it can deliver but also what support it needs from governments to be successful. The upcoming 17th Conference of the Parties (COP17) to the United Nations Framework Convention on Climate Change (UNFCCC) in Durban, South Africa, will present an important platform to do so.

Yet, whose responsibility is it? Who decides what risks are worth taking and who is responsible for the consequences when reality turns out to be worse than the risk assessment? Who is going to pay for it all? These questions are particularly timely given the current discussion about the distribution of economic benefits and costs between countries related to the climate issue.

The European Union claims it has been successful in reducing CO₂ emissions in line with its commitments under the Kyoto Protocol. This is correct if one measures the emissions from consumption on the EU territory. However, the carbon embedded in the increased product imports from China alone cancels out this reduction. If we include embedded carbon in imports



from other countries, then the EU balance sheet shows a substantial increase in CO2 emissions. So, whose carbon is it? In Germany, the government has decided to shut down all its nuclear plants by 2022 following strong public anti-nuclear opposition post-Fukushima. Yet the risks of operating nuclear plants in Germany versus Japan are clearly different. The German decision will have consequences for the global reduction of greenhouse gas emissions (GHG) emissions and climate change. It will also impact German industry and the ability of other countries to operate nuclear plants. It is difficult to see how we can achieve the needed reductions in GHG emissions globally without a substantial share of electricity supply from nuclear. Yet who will pay the bill and take responsibility for the consequences of the German decision?

Across the Atlantic, the United States has developed a way to exploit shale gas energy resources on a massive scale. The consequences of the extraction methodologies seem unclear. Some countries are showing caution at allowing the use of hydraulic fracturing – known as ‘fracking’ – that lies at the heart of the methodology. Who is deciding the tradeoff between national energy security and potential environmental damage? And who will pay the bill if there is a problem? Given what we have seen after the Deepwater Horizon platform in the Gulf of Mexico and the Fukushima disaster in Japan, it is likely governments will put a large share of the blame and financial burden on business.

What all these issues clearly demonstrate is the need for the global business community to address the question of roles and responsibilities in the energy and climate debate.

ABOUT WBCSD?



The World Business Council for Sustainable Development (WBCSD) is a CEO-led, global association of some 200 companies dealing exclusively with business and sustainable development.

The Council provides a platform for companies to explore sustainable development, share knowledge, experiences and best practices, and to advocate business positions on these issues in a variety of forums, working with governments, non-governmental and intergovernmental organizations.

If governments cannot create a sustainable world, what is the responsibility of companies? Should they remain silent bystanders, acknowledging the problem but not taking action? Or should they recognize their broader responsibility, given the breadth of their resources and competences, and actively participate? Most likely, it will be the second option but again, this is a question of responsibility.

TRANSITION TO SUSTAINABILITY BRINGS BUSINESS OPPORTUNITIES

The question of responsibility becomes particularly acute when looking at the global trends taking place. Over the next forty years, the global population will increase 30%, with the vast majority of the growth taking place in the cities of what is now the developing world.

This will require more energy to keep up with the economic growth stemming from this significant increase in population and the migration to cities. The policies created now, in the EU and elsewhere, will therefore be crucial in determining our future energy infrastructure, the level of GHG emissions, and the impact of issues ranging from energy security to climate adaptability over the next century.

Most likely, the next decades and the inevitable transition to sustainability will foster commercial opportunities and a greater demand for green products and services from companies.

Moving forward, the key driver for companies to address climate change will be competitive advantage, i.e. generating green growth, investments, jobs and shareholder value. According to Clean Edge, a research firm devoted to the clean-tech sector, the market for renewables is expected to more than double from around USD 115 billion in 2008 to just over USD 325 billion within a decade.

A GREEN RACE IS EMERGING

In line with the opportunities described above, a green race has emerged around the world. Governments, companies and individual actors have started to realize that to be successful in the future, they need to meet the demand for services and products in a resource-constrained world. And this recognition is happening in some unexpected places.

The United States has lost the top position for attracting clean energy investments, a position it had held since 2006. More and more countries are demonstrating serious ambitions. From wind power to nuclear reactors to high speed rail, China and other Asian countries have all increased their attractiveness to clean energy investors and are moving aggressively to capture the lead. In the second quarter of 2010 alone, China attracted USD 11.5 billion in asset-financing for clean technologies, more than Europe and the US combined.

Recently, the European Union has also changed its approach to climate change. It is now putting forward some green race arguments, in particular that it should act on climate change to protect its economic interests, jobs and economic growth. This is a clear shift from the ‘moral crusade’ for global climate actions which had sidelined the EU at major global climate change negotiations in the past.

Therefore, if they want to remain ‘leading’ tomorrow, today’s major economies must be able to supply resource-efficient, non polluting systems, products and services. And, to succeed, a transformation of their domestic markets is needed to build demand, capabilities and scale.

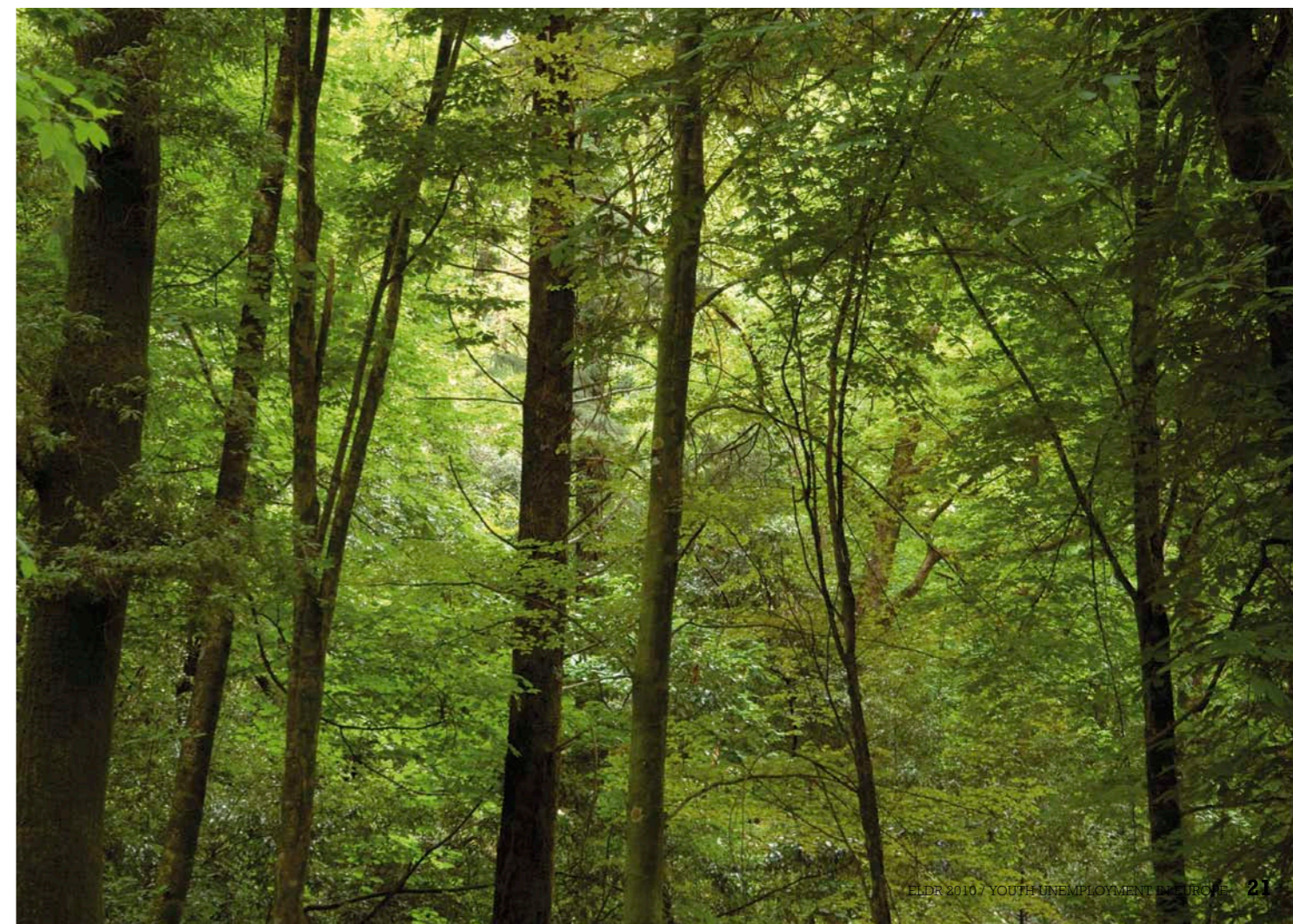
Yet, the energy system has a lot of inertia built into it and a new energy infrastructure based on renewables seems a long way off and would mean massive changes to societies. This level of change can only be achieved in a new partnership between governments and business. Governments should thus focus on unlocking business investments that will help drive the necessary solutions to mitigate the changing climate. It will not be productive to mandate a top-down approach while ignoring what business can do from the bottom up if given the right tools.

The main obstacle to greater business investment in low-carbon, clean energy solutions is the level of returns compared to the level of risk. This is why companies need stable public policy frameworks on which they can build long-term investment strategies. Those countries that deliver these frameworks will be the winners in the emerging low-carbon economy.

Countries will ultimately determine the playing field, but they cannot achieve success without business as a committed partner to do what it does best: innovate, adapt, collaborate and implement.

This dynamic, more than any other single factor, will be the foundation on which the green race is run. ■

GOVERNMENTS SHOULD THUS FOCUS ON UNLOCKING BUSINESS INVESTMENTS THAT WILL HELP DRIVE THE NECESSARY SOLUTIONS TO MITIGATE THE CHANGING CLIMATE



EU COMMISSION ROADMAP FOR MOVING TO A COMPETITIVE LOW CARBON ECONOMY IN 2050

MODELLING APPROACH FOR THE 2050 ROADMAP

The results and findings presented in this Communication are based on a comprehensive global and EU modelling and scenario analysis on how the EU could shift towards a low-carbon economy by 2050 against the backdrop of continued global population growth, rising global GDP and varying global trends in terms of climate action, energy and technological developments.

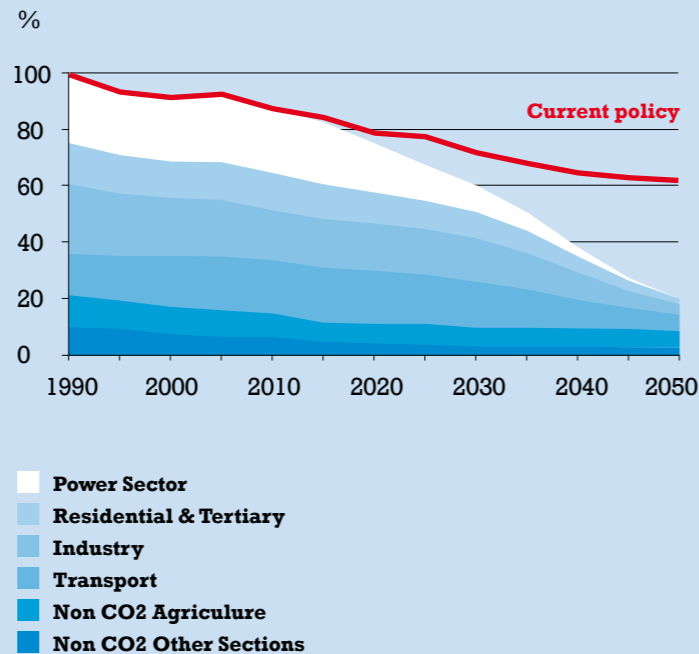
A set of global projections were used to look at global impacts of climate action, how it relates to the energy sector, agriculture and deforestation. Furthermore, impacts on the EU's competitive sectors were projected to assess the possible risks of ambitious actions in the context of fragmented global action on climate.

Detailed EU projections were made within a wide set of potential future scenarios, focussing on the sensitivity regarding assumptions on global fossil fuel price developments and rate of technological innovation to analyse the sectoral contribution, including from agriculture and other land uses. While there are always uncertainties relating to long term projections, results have been made more robust by developing a wide set of scenarios with different assumptions.

Future modelling improvements could consider better representation of the impacts of climate change itself, as well as energy storage and smart grid solutions for distributed generation.

Figure 1 illustrates the pathway towards an 80% reduction by 2050, shown in 5 year steps. The upper 'reference' projection shows how domestic greenhouse gas emissions would develop under current policies. A scenario consistent with an

FIGURE 1
EU GHG EMISSIONS TOWARDS AN 80% DOMESTIC REDUCTION



80% domestic reduction then shows how overall and sectoral emissions could evolve, if additional policies are put in place, taking into account technological options available over time.

Emissions, including international aviation, were estimated to be 16% below 1990 levels in 2009. With full implementation of

current policies, the EU is on track to achieve a 20% domestic reduction in 2020 below 1990 levels, and 30% in 2030. However, with current policies, only half of the 20% energy efficiency target would be met by 2020.

If the EU delivers on its current policies, including its commitment to reach 20% renewables, and achieve 20% energy efficiency by 2020, this would enable the EU to outperform the current 20% emission reduction target and achieve a 25% reduction by 2020. This would require the full implementation of the Energy Efficiency Plan¹ presented together with this Communication, which identifies measures which would be necessary to deliver the energy efficiency target. The amount of currently allowed offsets would not be affected.²

The analysis also shows that a less ambitious pathway could lock in carbon intensive investments, resulting in higher carbon prices later on and significantly higher overall costs over the entire period. In addition, R&D, demonstration and early deployment of technologies, such as various forms of low carbon energy sources, carbon capture and storage, smart grids and hybrid and electric vehicle technology, are of paramount importance to ensure their cost-effective and large-scale penetration later on. Full implementation of the Strategic Energy Technology plan, requiring an additional investment in R&D and demonstration of € 50 billion over the next 10 years, is indispensable. Auctioning revenue and cohesion policy are financing options that Member States should exploit. In addition, increasing resource efficiency through, for instance, waste recycling, better waste management and behavioural change, as well as enhancing the resilience of ecosystems, can play an important role. Also, continued effort to strengthen research on climate mitigation and adaptation technologies will be required.

LOW CARBON INNOVATION: A SECTORAL PERSPECTIVE

The Commission's analysis has also explored pathways for key sectors. This analysis looked at a range of scenarios assuming different rates of technological innovation and different fossil fuel prices. They produced largely convergent results with respect to the magnitude of reductions needed in each sector in 2030 and 2050 as indicated by the ranges presented in Table 1. The development of sectoral policy options will have to go into greater depth on costs, trade-offs, and uncertainties.

A secure, competitive and fully decarbonised power sector

Electricity will play a central role in the low carbon economy.

'A WIDE RANGE OF EXISTING TECHNOLOGIES WILL NEED TO BE WIDELY DEPLOYED'

TABLE 1
SECTORAL REDUCTIONS IN %

GHG reductions compared to 1990	2005	2030	2050
Total	-7	-40 to -44	-79 to -82
Sectors			
Power (CO ₂)	-7	-54 to +68	-93 to -99
Industry (CO ₂)	-20	-34 to -40	-83 to -87
Transport (CO ₂ *)	+30	+20 to -9	-54 to -67
Residential and services (CO ₂)	-12	-37 to -53	-88 to -91
Agriculture (CO ₂)	-20	-36 to -37	-41 to -49
Other non-CO ₂ emissions	-30	-72 to -73	-70 to -78

* inclusive CO₂ aviation, exclusive maritime

The analysis shows that it can almost totally eliminate CO₂ emissions by 2050, and offers the prospect of partially replacing fossil fuels in transport and heating. Although electricity will increasingly be used in these 2 sectors, electricity consumption overall would only have to continue to increase at historic growth rates, thanks to continuous improvements in efficiency.

The share of low carbon technologies in the electricity mix is estimated to increase from around 45% today to around 60% in 2020, including through meeting the renewable energy target, to 75 to 80% in 2030, and nearly 100% in 2050. As a result, and without prejudging Member States' preferences for an energy mix which reflects their specific national circumstances, the EU electricity system could become more diverse and secure.

A wide range of existing technologies will need to be widely deployed, including more advanced technologies, such as photovoltaics, that will continue to become cheaper and thus more competitive over time.

Energy specific scenarios and the means of achieving such decarbonisation, while ensuring energy security and competitiveness, will be examined in the Energy 2050 Roadmap. This will build on the established EU energy policy and the EU 2020 Strategy. ■

¹ Energy Efficiency Plan - COM(2011) 109.

² As agreed by the emissions trading Directive 2003/87/EC (as amended by Directive 2009/29/EC) and the effort-sharing Decision (Decision 406/2009/EC).



A LIBERAL ROADMAP FOR ENERGY TRANSITION?

The choice of 'Energy Transition' as the ELDR's new focus theme for the year 2012 is both timely and necessary. Whereas policy debates about energy independence, climate change and oil prices all include calls for energy transition, there is no blueprint for the way ahead and many questions remain. No region has made the transition and though there are certain countries that have a national consensus on certain aspects – such as a party wide commitment to the environment in Sweden – there is no shining example of the road ahead that could be easily emulated.

The first step will therefore be political: can we create a consensus and a sense of urgency on the need for energy transition? The ELDR election manifesto for 2009 spelled out the vision:

'The unique challenge of climate change and energy security demands unified action across Europe. Europe must become an efficient low carbon economy leading the world in conservation, renewable energy and creative market instruments, thereby ensuring incentives for new jobs.'

We hope this publication and the upcoming year will provide an impetus to translate this vision into political action. There does not need to be agreement on any single reason for lessening our dependence on fossil fuels. Human rights defenders will argue this can lead to less dependence on oil from dictatorial regimes, therefore paving the way for a more value-based foreign policy. They will get support from defense and security specialists who argue for energy independence for geo-strategic reasons. Those concerned by climate change will see advantages as fossil fuel emissions can be reduced and economists see opportunities for greening the economy, as Europe tries to climb out of a recession. While the reasons are numerous and there may not be agreement on each and everyone, it is clear that your reason for supporting energy transition will influence the way you will want to go about it.

Step two will include an inventory of the technical possibilities and the cost and benefit implications. Those concerned about climate change may put nuclear power top of their list, which is unlikely to gain support from opponents. Inspired by the Arab Spring and the possibility of a stable and prosperous North Africa, solar fans will want major investments in a Sahara grid, arguing that only 2% of the sun's energy can fuel our whole planet for decades. Experts of various backgrounds will insist on energy saving, because it not only reduces demand, but also brings down costs for households and businesses, a sure vote getter. It is clear that in the broad liberal family we will find supporters for all the various approaches and the debate is bound to be lively and inspiring.

Finally, we will come to the 'How' questions. Liberals want a level playing field, also in the energy markets, but what is the best way to achieve that? We may quickly agree that subsidies on fossil fuels should be abolished, but what about subsidies for renewable energy? Naturally there should be energy-efficiency labels for energy suppliers, so that consumers can choose the AAA product, but how do we decide which source is the most sustainable? Since the risks for nuclear power have proven an insurmountable obstacle for purely private investment, should governments underwrite the long-term risks at taxpayers' expense? Is there such a thing as a liberal industrial policy and does this include favoring certain technologies over others? Can local and national governments set examples by being first movers and greening their public procurement more? One thing businesses agree on is that without a reliable and realistic price for carbon they are not ready to invest in long-term change. Why then has the EU been so disastrously slow in bringing this about and what role is there for Liberals to push this forward?

In short, the road ahead is long and complicated, but therefore precisely the challenge that liberals are ready to rise to, especially given the urgency of the situation. Raising oil prices, climate change, energy dependence on unreliable autocratic regimes and a deep economic crisis are creating an environment in which waiting is no longer feasible. Stanford economist Paul Romer once said: *'A crisis is a terrible thing to waste'* and I agree. The opportunity for real long-term change is better than ever. We look forward to a dynamic year filled with ideas, vision and action! ■

THE OPPORTUNITY FOR REAL LONG-TERM CHANGE IS BETTER THAN EVER



RECOMMENDATIONS

ROUND TABLE

27/05/2011
AMSTERDAM

GENERAL POLICY

- Consistency & long-term planning
- Clear time scale
- Abolish taxes and other measures that support fossil fuels
- Create an effective market for CO2-emissions
- Make the market move faster, set targets
- Stimulate green investments
- Lower the hurdles, to let markets do their work
- The magical triangle of success: Policies, Technology and Commitment
- Change finance departments
20th century ideas on costs, benefits, social and environmental costs
- Governments should free more funding for investments in R&D

LIBERAL FUNDAMENTALS

- We miss the sense of urgency and want more attention for aviation, industry, agriculture, consumers and transport
- The societal importance of energy transition justifies major investments
- The liberal agenda must be positive, this is a story of hope and vision
- The transition is challenging, but worth the effort
- We will not push costs and work forward to next generations
- Depoliticise and have the guts to act, don't wait for others and lead by example
- Energy transition is an issue of moral responsibility
- Never lose the problem (climate change) out of sight when discussing the solutions

PHOTO REPORT

ELDR

ROUND TABLE

27/05/2011
AMSTERDAM

LAURA FULGORI
PHOTOGRAPHY



Marijn Bosman





Duncan Brack
Liberal Democrats

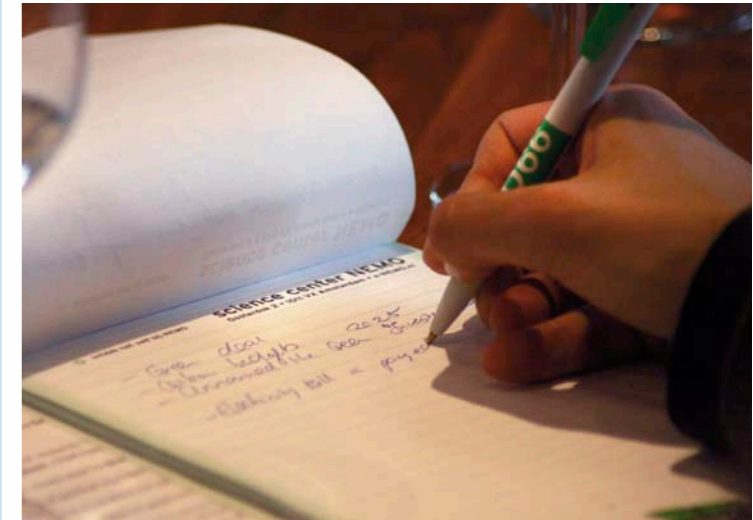
PROGRAMME 27/05/2011

- 12.30 Welcome and networking Lunch**
- 13.30 Word of welcome by Lousewies van der Laan**
ELDR Vice-President
- 13.40 Good examples from the Netherlands**
by Stientje van Veldhoven, MP for D66
- 13.55 Good examples from Great-Britain**
by Duncan Brack
Special Advisor to Energy & Climate Change
Secretary of State Chris Huhne, Liberal Democrats
- 14.10 Good examples from Sweden**
by Christian Ottosson
Municipal Commissioner in Huddinge
for Centerpartiet
- 14.25 Discussion**
- 14.50 Outcome of the survey**
presentation by Gerben-Jan Gerbrandy
MEP for D66
- 15.00 Break**
- 15.30 Presentation of conclusions ELF research**
"Green growth: how best to promote green
investment" by Chris Nicholson
Chief Executive of CentreForum
- 15.45 Round table discussion**
moderated by Stientje van Veldhoven

Participants are a mix of political representatives,
industry stakeholders and academics.
What is the most pressing condition for innovation
in effective energy transition and what should be
the role of the (liberal) government in this matter?
- 17.15 Presentation of the principal conclusions**
by Maas Goote
Head of Programme Climate and Energy
(International) at the Dutch Ministry of Infrastructure
and Environment; Head of the Netherlands
delegation (speaking in his personal capacity)
- 17.30 Reception**

**27 May 2011 Nemo Science Museum Amsterdam
the Netherlands**

Organisation: D66 in cooperation with Centerpartiet,
the Liberal Democrats and ELF. Funded by ELDR and the
European Parliament.



Cristian Ottosson
Centerpartiet





Lousewies van der Laan / ELDR
 Stientje van Veldhoven / D66
 Chris Nicholson / CentreForum



Chris Nicholson
 CentreForum



Gerben-Jan Gerbrandy
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