

e-brief

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Climate, Energy and Competitiveness

An Eight-Point Programme for European Success



By Jules Kortenhorst

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'Imagination is the beginning of creation. You imagine what you desire, you will what you imagine and at last you create what you will.'

[George Bernard Shaw](#)

On 04 February 2011, heads of state and government will convene a special European Council in Brussels to discuss energy and innovation policy.¹ If the decisions taken there are to set Europe on a truly strategic path, the leaders must work to understand the changing nature of climate and energy policies – and the enormous opportunity that this shift provides. Energy can be a key driver of European success, solidarity and competitiveness, to the benefit of European businesses and citizens. But only if our leaders act now to make it so, before it is simply too late.

I want to look at the challenges and opportunities for Europe and lay out a number of suggestions for European Union climate and energy policy (the Eight-Point Programme I propose begins on page 5). Should these suggestions be endorsed at the February European Council, the results could move Europe to the forefront of 21st century global economic developments and significantly strengthen Europe's competitiveness for decades to come.

New World, New Challenges

Over the past few years, we have seen major shifts in energy, climate and competitiveness policy-making around the world:

- In the run up to the [United Nations Framework Convention on Climate Change \(UNFCCC\)](#) meeting in Copenhagen, many countries significantly strengthened their domestic climate policies. International efforts will increasingly follow rather than lead national and local policy change, even

The opinions expressed in this e-brief are those of the author alone and do not necessarily reflect the views of the Lisbon Council, the European Climate Foundation or any of their associates.

'Capturing the opportunity from a global transition to resource-efficiency and low-carbon prosperity is becoming the real challenge.'

2. [Alessandro Leipold, Preventing Greek Tragedy from Becoming a Eurozone Disaster \(Brussels: Lisbon Council e-brief 06/2010\).](#)

3. [Javier Blas, Jack Farchy and Gregory Meyer, "World Moves Closer to Food Price Shock," *Financial Times* 12 January 2011.](#)

- if over time a well-designed international agreement will enable, motivate and accelerate domestic action.
- Increasingly, developing countries are accelerating the pace of the transition to a low-carbon economy, moving in some cases faster than developed countries. Europe has clearly not given up its desire to lead on climate change, but other developed countries, first and foremost the USA and Canada, are at risk of becoming the laggards.
- Business leaders are moving forward in shaping business strategies for low-carbon competitiveness irrespective of a global agreement. Recent leadership from CEOs like Gerard Kleisterlee of [Philips](#), Peter Löscher of [Siemens](#) and Paul Polman of [Unilever](#) illustrates their impatience to get on with the job and reap the economic opportunities of the low-carbon race.
- Climate change is no longer seen exclusively as the major "environmental" challenge of our time. Increasingly, it also represents the most significant opportunity for economic transformation and growth. Capturing the opportunity from a global transition to resource-efficiency and low-carbon prosperity is becoming the real challenge.

While the climate-change debate shifted, the global economy confronted the most significant financial crisis for 80 years. Much has been written about the fallout of the crisis.² But it is clear that at least four major lessons for climate and energy can be drawn from the financial crisis:

- In a globally connected economy, the emergence of businesses based on renewable energy and resource efficiency will spread rapidly around the globe.
- The downside is every major economy is also exposed to global economic shocks resulting from resource scarcities or climate upheavals, as the recent fallout from rising food prices has shown.³
- Capital will be scarce, particularly in Europe. The dual challenge of enormous fiscal constraints, a banking system struggling to deal with the errors of the past and the increased capital requirements of the future will make capital more costly, particularly in Europe where the crisis has hit particularly hard and left governments heavily indebted.
- Against this backdrop, the pressure on European governments to focus on economic growth and jobs will be bigger than ever. But where will economic

'Four of the seven emerging industries in China's new five-year plan relate to the low-carbon future.'

4. success come from in a globalizing economy? How and equally importantly, in which sectors, will Europe compete? Competitiveness, jobs creation and economic growth will be on the top of Europe's agenda.

[Tao Wang and Jim Watson, *China's Energy Transition – Pathways for Low Carbon Development* \(University of Sussex: Tyndall Center for Climate Change Research, 2009\).](#)

While the developed world may still be wrestling with the fall out of the financial crisis, most emerging economies are already back on a strong growth track. China posted nearly 10% growth in 2010; India was closely behind with 8%. It is not only their absolute growth, it is also the nature of that growth that is remarkable, with much of it built on the industries of the low-carbon future.⁴ Emerging or growth economies will likely set the pace and even the direction of our global economy in the coming decades.

- 5.
- 6.

[Zhang Xiang, "State Grid to Invest 500 Billion Yuan in China's UHV Transmission System," *English Xinhuanet.com* 06 January 2011.](#)

[Tom Miles and David Stanway, "China Meets Five-Year Target to Cut Energy Intensity: Report," *Reuters* 06 January 2011.](#)

- 7.

[S. Klamp, "Chinese 12th Five-Year Plan – New Energy, New Energy Cars," *Clean Invest* 08 November 2010.](#)

Contrary to the stereotype, China is rapidly becoming a global leader in the technologies of a resource-efficient, low-carbon economy: China recently announced it will invest 500 billion yuan (€56 billion) over the next five years to extend its ultra-high voltage electricity transmission infrastructure.⁵ The total length of the system will reach 40,000 kilometres by the end of 2015, and will have a transmission capacity of 400 million kilowatts by the end of 2020. On energy efficiency, China has just met its target to cut the amount of energy produced per unit of GDP growth by 20% between 2006-2010.⁶ In 2010, one out of two windmills installed worldwide was installed in China. And finally, four of the seven emerging industries in China's new five-year plan relate to the low-carbon future (energy conservation and environmental protection, advanced manufacturing, new energy, and new-energy automobiles).⁷

And, despite a slow start, the US may still mobilise to catch up. In his annual [State of the Union speech](#), President Barack Obama proposed a one-third increase in government funding for clean energy, including an 85% increase in investment in renewable energy resources in the next US budget, setting out the goal of providing 80% of America's electricity from clean energy sources by 2035. He told the US Congress he was committed to "strengthen our security, protect our planet and create countless new jobs for our people" through investments of this type, and vowed to make the United States the first country in the world with more than one million electric vehicles on the road by 2015.

Quo Vadis Europe?

So what does all this mean for Europe? Should our leaders focus on energy policy from a narrow, nationalist perspective? Or should they connect the dots and frame a vision of a Europe that can compete in a global economy where resource efficiency, clean energies and low-carbon prosperity are the ingredients

'The debate on competitiveness is dominated by business voices from the past.'

8. [William Pentland, "Clean Energy Investment Reached Record High in 2010," *Blogs.Forbes.com* 22 January 2011.](#)

9. [Pui-Wing Tam and Cari Tuna, "Silicon Valley 3.0: Tech's New Wave," *The Wall Street Journal* 21 October 2010.](#)

10. [GE, *Ecomagination Fact Sheet*.](#)

11. [Abhishek Shah, "What a Climate Bill Could Do To Increase Renewable Energy," *Green World Investor* 28 April 2010.](#)

12. ["Kleiner Perkins Caufield & Byers Expands Greentech Initiative with \\$500 Million Green Growth Fund and \\$700 Million KPCB XIII Fund," *Green VC* 02 May 2008.](#)

13. [Nathanial Gronewold, "Corporate 'Sustainability' Push Flowers in Sluggish Economy," *NYTimes.com* 17 November 2010.](#)

14. [European Roundtable of Industrialists, *Co-Creating the Sustainable Energy Economy* \(Brussels: ERT, 2010\).](#)

for success? The future of growth economies is low-carbon, so Europe has a stark choice. Early indications are that the new industrial revolution based on building a sustainable economy is ramping-up fast around the world. In a year of post crisis financial constraints, businesses, governments and citizens invested €178 billion in clean energy, up 30% from 2009.⁸ In Silicon Valley, more venture capital is now going to clean tech than to information technology.⁹ The smartest technology students in Tsinghua University, Massachusetts Institute of Technology, Imperial College in London, Delft University of Technology or the Indian Institute of Technology in Mumbai are now choosing careers in energy. And where human and financial capital flow, economic opportunity and employment will follow.

Big companies are moving as well. [GE](#) started Ecomagination six years ago convinced that it could build a successful business based on sustainability. The programme now represents a substantial portion of GE's global revenue.¹⁰ Says Peter Löscher, CEO of Siemens: "We are very bullish about the market opportunity that exists for renewable energy and particularly for wind energy."¹¹ Adds John Doerr, CEO of [Kleiner Perkins Caufield & Byers](#), a California-based investment fund that has moved heavily into low-carbon technologies: "We urgently need to advance our greentech industry at a speed and scale commensurate with the challenges we face. We believe green technologies are both the key to solving our energy crisis and a tremendous business opportunity."¹² Adds Paul Polman, CEO of Unilever: "We are already finding that tackling sustainability challenges provides new opportunities for sustainable growth...It creates preference for our brands, builds business with our retail customers, drives our innovation, grows our markets and, in many cases, generates cost savings."¹³

The [European Round Table](#), Europe's leading industrialists, recently published a report on "Co-Creating the Sustainable Energy Economy."¹⁴ The study finds that "the fight against climate change is more than simply the reduction of CO₂ emissions. The ERT believes that it is about fundamentally reshaping our economy, from the way we generate electricity and manufacture our products to how we live and work. This new economy will need to be a sustainable energy economy."

Of course, a new competitive landscape will create winners and losers. Creative destruction, the theory of innovation first put forward by economist [Joseph Schumpeter](#), will be at work. Not surprisingly the loudest voices already come from companies that face challenges and are among the potential losers. The potential winners are too busy creating the jobs of tomorrow.

'Decarbonisation of the power sector is the centrepiece of a low-carbon economy.'

15. [HSBC, *Sizing the Climate Economy* \(London: HSBC Global Research, 2010\).](#)

16. [European Climate Foundation, *Roadmap 2050: A Practical Guide to a Prosperous Low-Carbon Europe* \(The Hague: ECF, 2010\).](#)

In fact, [HSBC](#) estimates that global climate business will be \$2.2 trillion (€1.6 trillion) in 2020.¹⁵ Remarkably, HSBC concludes that China's low-carbon market will overtake the US but not that of Europe. In other words, leadership in the environmental field will not be sustained in a policy vacuum. We need a visionary approach and active engagement on energy issues from leaders like those gathering in Brussels for the February European Council.

EU Low-Carbon Competitiveness – An Eight-Point Plan

It is against this backdrop of economic opportunity and accelerating competition in the race to low-carbon economy that EU leaders must frame energy policy on 04 February 2011 – and build on with an annual Spring Energy Summit every year.

So far, the integrated vision of economic competitiveness, climate change and energy has not been sufficiently clear in EU policy. The debate on competitiveness is dominated by business voices from the past, while the European Investment Bank funds new coal-fired power plants, national leaders (with the collusion of the European Commission) agree to extend coal subsidies to 2018 and the [Emissions Trading System \(ETS\)](#), itself a cornerstone of Europe's approach to building a low-carbon economy, is wobbly at best. Instead, there are eight policy recommendations that EU heads of state and government should endorse to move us onto a new path:

Provide a Clear Signal

- Create an investment-driving, low-carbon EU vision that combines the goal of 80-95% emissions reductions by 2050 with the perspective of a Europe that leads, and make this vision a tangible and inspiring part of the direction of all European governments.
- Commit to the decarbonisation of the power-sector as a vital building block of the low-carbon economy. The Roadmap 2050 from the European Climate Foundation shows that full decarbonisation of the EU power sector by 2050 is both technically feasible and economically affordable with the right policies.¹⁶
- Create pathways towards intermediate results in 2020 and 2030. Specifically, commit immediately to a 30% reduction in CO₂ emissions by 2020. Only a substantial increase shows a credible commitment to the low-carbon vision and will provide the much-needed certainty to businesses and markets. Furthermore, the move to 30% is well within

Eight-Point Plan
Energy
Competitiveness

'No EU Member State should remain an energy island after 2015.'

17. [European Commission, Report from the Commission to the European Parliament and the Council – Progress towards Achieving the Kyoto Objectives](#) 12 October 2010.

reach as a 17.3% reduction was already achieved by the end of 2009 against a 1990 baseline.¹⁷

18. [European Climate Foundation, Roadmap 2050](#).

Put Our Money Where Our Mouth Is

- A consistent and economy-wide price on carbon that effectively mobilizes capital towards technologies of the future is key. The ETS remains the cornerstone of Europe's climate policy, but suffers from the low level of ambition of the 20% cap as well as the lack of complementary policies to increase its effectiveness.

19. [Anthony D. Williams, Wikinomics and the Era of Openness: European Innovation at a Crossroads](#) (Brussels: Lisbon Council e-brief 05/2010).

- The ECF's Roadmap 2050 shows that decarbonisation of the power sector is the centrepiece of a low-carbon economy. If created on a European scale it is also very affordable.¹⁸ Electricity grids are the key infrastructure element that will connect the EU power markets.¹⁹ Public capital needs to be matched with private capital to accelerate the deployment of these grids. No EU Member State should remain an energy island after 2015.

- Competitive leadership will not come without substantial increases in R&D commitments. The EU's [Strategic Energy Technology Plan \(SET-Plan\)](#) is an excellent start but modest in comparison to the challenge ahead and should be fully financed going forward. An increased SET-Plan should be a priority in Europe's multi-annual financing discussions. Energy businesses will need to increase their spending on R&D as well.

Set the Standards

- Energy efficiency is so often labelled the low hanging fruit of reducing emissions. But if it were so easy, why is it not getting done? A firmer commitment to driving energy efficiency, and in particular the roll out of large scale programmes to do deep energy efficiency retrofits of the existing building stock will create large numbers of jobs, grow the market for energy efficiency products and technologies and reduce energy demand. We want to stress the responsibility of governments to set the right example and start retrofitting the many older, classic buildings where public authorities operate.
- Industry will benefit enormously if energy efficiency standards are demanding and continuously tightened. Nowhere is this more true than in automotive emissions where the fight for leadership position on new drive trains, be they electric, hydrogen or biofuel based,

'Concerted action taken at the European Council can give Europe the lead in the 21st centuries' main fields of competition.'

is already well on its way. Tougher automotive standards will therefore help the European car industry to remain competitive.

All of this is good news: an ambitious energy policy, that drives Europe's energy security and strengthens the single market, is in perfect synch with Europe's drive towards reduced CO₂ emissions and low-carbon prosperity. The economic transition will help maintain and strengthen Europe's competitiveness in a global economy that competes on sustainability and resource efficiency. The challenge for our leaders is to take Europe's three main priorities – the economy, energy and climate change – and see that they are interdependent. Concerted action taken at the February European Council and an integrated policy vision on these issues can give Europe the lead in the 21st centuries' main fields of competition: the race to lead on technology and deliver low-carbon prosperity to our citizens for decades to come.

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