

# The hothouse effect:

## Achieving healthy growth in the green energy sector

by Campbell Dunford, CEO of the Renewable Energy Foundation

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**D**riven by concerns about climate change and security of supply, public and political support for renewable energy has never been stronger. Generous subsidies and market interventions have encouraged extremely rapid deployment in many European states, particularly in electricity, and it is now a commonplace of the financial press that environmental business has become mainstream. And so it should, but many are now questioning whether this rapid explosion is in fact creating a truly secure position for environmental technologies, one grounded in the realistic perspectives of engineering and science and not a dangerous, oversold, bubble.

A wealth of empirical data about the renewable energy experience worldwide, and particularly in Europe, is now slowly emerging, allowing political decision makers and investors to evaluate the success of their policy instruments. These empirical results, as you would expect of real-world data, are mixed, and as we all get to grips with the implications a reorientation in the renewable energy sector is needed. Indeed, we can already see signs of the coming sea change in the revisions now proposed to Spain's support mechanisms and to the UK's Renewables Obligation.

Perhaps the most important recognition now dawning on us is that the shift to any significant level of renewables in our total primary energy supply will be difficult. All previous fuel transitions have been from a manifestly inferior fuel to a manifestly superior one. However, while renewables have many commendable extrinsic qualities, they often struggle to compete on intrinsic values such as density, or, as is now well-known in the electricity supply industry, are troubled with variability and sometimes wide and unpredictable variability of output. These issues have to be faced and dealt with, not ignored or dismissed. Fine-tuning our policies so that innovation is encouraged and the usefulness of renewables improved is a real challenge, and at present it is hard to avoid the conclusion that the consequence of heavy income top-up through subsidy (roughly 60 percent in the UK, costing consumers £1bn per annum.) has been to cushion the sector from the real world necessities that alone can stimulate the development of effective solutions.

Awareness of these problems is growing, and must be welcomed and encouraged by renewable energy investors to ensure a degree of traction over the changing course of future policy. With care the sector should be able to negotiate a new era of tough love, which allots roles proportionate to

merit. While this may seem a modest goal, and will be difficult for some green NGOs to swallow, it is obviously preferable to the pro-renewables lip-service which disenchanted governments may otherwise adopt. Leadership on this issue can only come from those taking the long view from the very top of the industry.

A key element will be co-operation in the publication and analysis of reliable data. This is particularly true in the electricity sector, which presents unique and uniquely acute difficulties. In the wake of the pan-European grid disturbance on November 4, 2006, when 15 million consumers lost supplies and a much more severe failure was only narrowly averted, the fragility of the system is now under the spotlight, and it is becoming painfully clear that on this occasion the contribution of renewable generation was probably harmful (see [www.ucte.org](http://www.ucte.org)). Only absolute candour will lead to solutions, and achieving this will, again, require far-sighted and persuasive leadership.

Openness is also required at a much more mundane, though no less important, level. In most European states it is relatively easy to access information concerning the actual performance of subsidised generation. However this transparency is variable with the UK being amongst the least open to examination. In an attempt to remedy this the Renewable Energy Foundation has recently published the first issue of Renewable Energy Data (freely downloadable from [www.ref.org.uk](http://www.ref.org.uk)), which analyses and renders user-friendly raw data from the UK government organisation charged with overseeing the operation of the Renewables Obligation. The publication presents monthly generation statistics for all those registered under the programme, some 900 generators, and for the first time enables investors and politicians to get a snapshot of the real world performance of the various technologies. As we feel our way forward towards greater quantities of renewable energy we need to ensure that public and political enthusiasm is replaced by solidly grounded trust. Only empirical data, accountability, and transparent engineering will deliver this.

The Renewable Energy Foundation is a registered UK charity, funding research into renewable and alternative energy technologies. The foundation relies on private donations for support and has no political affiliations or corporate members. **CEO**

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