

The new energy economy: Greener, smarter, stored and efficient

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Energy lawyers are part of a world deemed conventional and cautious but which is truly one of innovation and challenge. Energy companies, be it fossil fuel, renewable or service companies have been at the forefront of innovation and investment, while working in markets facing various economic and political challenges

More than twenty years ago when I started working I listened avidly to engineers explaining to me why energy was the only thing one could not really store. I still do listen avidly, but now about how renewables can really work. It was not so long ago I kept hearing the word intermittency. And now I am hearing about energy storage, about my mobile allowing me to be a smart buyer of electricity and about all of us being able to build a greener world for our children.

Is it really possible? Indeed it is I am sure. Energy companies have long been innovative in addressing challenges in times of uncertainty. The energy paradigm seems to be changing quicker in this decade than in the past. We are shifting from producers/consumers to prosumers, from passive buyers to active buyers, from conventional energy to renewables, from large generation investments to large grid investments. Smart grids and super grids will be required grid investment has become vast and if we look at the EU investment plans for the near future we can easily confirm that these outgrow the investment in generation. Off-grid projects will be implemented and own consumption projects will become considerable. We will become more and more efficient over time and all this will need to be managed.

Globally, different energy worlds will coexist and if we look at investments worldwide we see that governments are not excluding any paths when it comes to energy.

We know the EU is dealing with certain difficult economic situations while at the same time massive investments are required to attain self-imposed renewables targets. In order to reach this we need a real internal energy market and we need to push further investment in grids. We also need to push further our investments in solutions such as storage. But we need to do this whilst keeping our economies competitive, attracting investment and keeping our regulatory frameworks stable.

As energy and infrastructure lawyers, we know investments need to be planned and contractual structures need to be robust and be able to overcome times of change and difficulties (having been through the unbundling of the energy sector, through bail-out times, and working at the same time with advanced and emerging economies, one really needs to think and act taking uncertainty for granted).



But even though we clearly live in times of uncertainty, governments and companies as well as individuals continue to push forward for a greener economy. Capital costs for renewables dropped considerably and in particular the all-in costs make renewables an attractive option. Also, more sophisticated analytics software is allowing stakeholders to better predict renewable generation output.

The energy world is rapidly changing. The best prepared to address the challenges of the new energy economy will keep ahead. The future will consist of large individual decisions and consumer interface will be crucial. One will need to understand the local market and act local but at the same time we will need to think and act globally. Undeniably we work in a *globalocal* world.

On top of that we will need to think and act digitally. We will need to focus on cybersecurity, on compliance and on integrated management. We will need as well to incorporate new tools and new skills such as natural capital valuation and translate that into contractual arrangements and policy formulations. We were already engineers, financial analysts, sociologists. We will need as well to be IT experts, biologists, marine experts and city planners.

Industry, IT and Energy will work hand-in-hand at an ever growing speed and as energy lawyers we must keep pace with this. For industry, energy efficiency is a concern today

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(not something to be considered in the near future only). Technologies that save energy or improve efficiency are being developed and used worldwide. The economic benefits of energy efficiency are enormous and there is definite room for growth in business opportunities.

And financing is available - from green bonds (which experts expect to grow by \$100 billion by this year) to project finance structures, from premium or feed-in tariffs to international funds, from private funding to lenders' financing, one is not short of options to consider.

With the decline in renewables costs, gains are expected to continue to increase substantially and investors are well placed to better hedge volatility of fuel prices. Investing in this new energy economy does not address only our concern for a better world. It makes good business sense.

Being an avid listener of engineers and scientists I truly believe the new energy economy may be greener, smarter, stored and efficient. Let it be our legacy.