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KPMG GLOBAL ENERGY INSTITUTE

KPMG Global Power & Utilities Conference 2014: Conference Report

7–8 October 2014
London, UK

kpmg.com/powerconference

Event at a glance

The KPMG Global Power & Utilities Conference is KPMG's premier annual event for Chief Executive Officers, divisional heads and financial executives in the power and utilities sector.

Launched in 2011 in Paris and successfully repeated in 2012 in Vienna, in 2013 in Berlin and in 2014 in London the KPMG Global Power and Utilities Conference is a premier business-to-business industry event for the power and utilities sector.

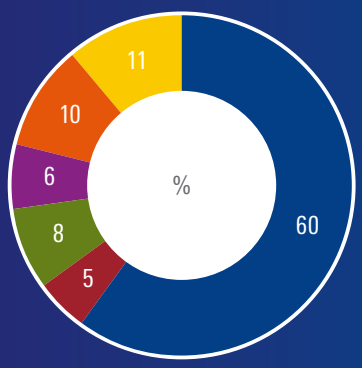
Goal
The goal of the conference is to provide participants with new insights, tools and strategies to help them manage industry-related issues and challenges. Attendees also have the opportunity to join their peers from leading power and utilities companies to share effective practices and participate in networking activities.

The conference program in numbers
- 2 days conference
- 3 networking events
- 24 industry leading speakers
- 7 plenary sessions
- 4 parallel sessions

Concept
The conference agenda focuses on strategic, financial, environmental and risk related issues that are top of mind for power and utilities executives. The intensive two days program consists of keynote presentations by distinguished leaders, issue-focused plenary roundtable discussions and interactive parallel sessions.

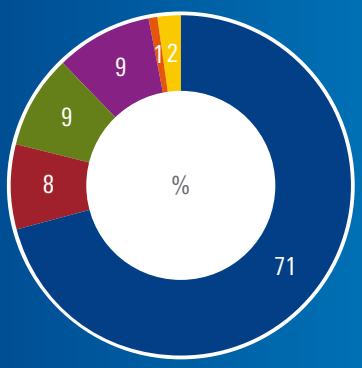
Delegate profile
With almost 300 delegates from 40 countries in attendance, the conference brings together executives from across a broad spectrum of the industry worldwide, including power producers, developers, investors, regulators and other key industry stakeholders.

The charts below indicate a typical cross section of conference delegates by sector and geography.



Sectors:

- Power generation, transmission, distribution
- Governmental, trade and industry associations
- Institutional, industrial, private equity investors
- Water, utility
- Media
- Other



Regions:

- Europe
- North America
- Middle East & Africa
- Asia
- South America
- Australia & South Pacific

Introduction

It is with great honor that we can present to you this summary of the fourth annual **KPMG Global Power & Utilities Conference** held in London, UK on **7-8 October 2014**.

With almost 300 delegates from 40 countries in attendance, our leading global forum brought again together executives from across a broad spectrum of the industry, including power producers, developers, investors, regulators and other key industry stakeholders.

The one and a half day conference featured industry leading speakers from all around the globe, examining the **power industry's trilemma of security of supply, low carbon and affordability**, as well as for the first time addressing some of the key issues facing the **water sector**.

The conference was opened by **Simon Collins, Chairman and Senior Partner, KPMG in the UK**, who spoke on the current business mood, the state of the UK`s energy industry, and the critical role that restoring trust has to play in the future of businesses.

We were honored to welcome on our global podium **Maria van der Hoeven, Executive Director of the International Energy Agency**, who shared her views with the audience about the *Challenges Facing the Power and Utilities Sector*.

On the second day of the conference we heard an interesting debate between **The Rt Revd Julian Henderson, Bishop of Blackburn** and **Alistair Phillips-Davies, Chief Executive, SSE plc** about the moral and ethical challenges facing utility companies. The discussion was followed by Mr. Phillips-Davies' keynote address titled *Working together to deliver a simple transparent market for customers*.

To conclude the conference, **Charles Hendry, Former Minister of State for the Department of Energy and Climate Change (DECC), UK**, gave a wide-ranging speech on how *Europe's energy policy must withstand global shocks*.

During the conference we had seven issue focused plenary sessions giving the chance to numerous high level speakers to share their views with the audience about the *Investor's perspective, Customer engagement, Market design and market reform, the Transformation of network businesses and The shape of the global water industry*.

We trust that you will find this summary an insightful overview of the key issues defining the power and utilities sector, and we look forward to welcoming you to our upcoming **KPMG Global Power & Utilities Conference 2015 on 28-29 October 2015 in Madrid, Spain**.

Sincerely,

Peter Kiss
Partner, Energy and Natural Resources, Nordics

David Gascoigne
Partner, Head of Power & Utilities, KPMG in the UK

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KPMG`s commitment to the power and utilities sector

Simon Collins,
Chairman and Senior Partner,
KPMG in the UK

> **“We remain committed to the power and utilities sector because the ability to make a difference in the world, and the link the industry has to the welfare of the world, and to have a direct role in the restoration of trust is very empowering.”**
>
> **Simon Collins,** Chairman and Senior Partner, KPMG in the UK

In a speech entitled ‘Restoring trust and securing investment’, Simon Collins, Chairman and Senior Partner, KPMG in the UK, spoke on the current business mood, the state of the UK energy industry, and the critical role that restoring trust has to play in the future of businesses.

Mr. Collins began by giving an overview on the state of the UK economy. “The UK is definitely feeling more resilient, and the economy is getting back to growth. For businesses that serve other businesses, the throttle is moving forward again on investment, with capital expenditure and M&A proposals being dusted off.”

However, he did warn that companies who are reliant on consumer demand are finding it tougher. He cited a number of discussions that he had recently had with Utilities’ Chief Executive Officers, who said that the situation remains very difficult for them. “If you look at measures like bad debts, slow payers and customer resistance to pricing, it still feels quite difficult.”

When taking a closer look at the global impact on UK businesses, it is a mixed picture for those businesses that are heavily reliant on exports. “The US is looking good; Asia is providing a mixed picture; but UK businesses that backed Europe, because it’s close to home and accessible, are finding it pretty flat.”

When looking at the legacy that the financial crisis has left behind in the UK, he said that it had brought the moral question of trust in business to the forefront. “When thinking about the eroding of trust, recent scandals in the banking and financial services industries have definitely damaged long term trust between business and society. However there are other sectors, including the energy sector, where we’ve had pricing and mis-selling issues in the UK.” This has made the need to restore trust in business generally, one of the biggest issues on his radar.

He went on to explain the impact of falling levels of trust. “We have seen more politicization of certain industries than we would have ever expected; due in part to egregious behaviour that has been witnessed in certain industries towards consumers.” He also highlighted that across a number of industries, there are regulators that currently have no incentive to be balanced, and are imposing trust upon the industries, making it difficult to operate and restore trust.

He set out the key issues for the industry as the need for forced innovation, and a forced need for investment. “This is challenging as no one likes to have to invest while trust is low and pricing is under pressure.”

However, despite these challenges, Mr. Collins remains optimistic for the power and utilities industry. “You only have to look at the statistics in the introductory video we’ve just seen, to see the underlying demographics of the industry and the growing demand. While you may see this as a challenge, I would compare that with other industries where demand is tailing off, which in many ways is much worse.”

In terms of KPMG’s commitment to the industry, he concluded “With over 15,000 experts globally, we bring together a broad and varied range of skills designed to give clients the insights and solutions to tackle the big issues that I’ve covered.”

“We remain committed to the power and utilities sector because the ability to make a difference in the world, and the link the industry has to the welfare of the world, and to have a direct role in the restoration of trust is very empowering.”

> **“With over 15,000 experts globally, we bring together a broad and varied range of skills designed to give clients the insights and solutions to tackle the big issues.”**
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Challenges facing the power and utilities sector

Maria van der Hoeven,
Executive Director,
International Energy Agency (IEA)

A lot has changed since the International Energy Agency (IEA) was born 40 years ago amid the first oil crisis, according to IEA Executive Director Maria van der Hoeven. The agency's core mission at its inception, she recalled in her keynote address, was to ensure oil security for its members.

"Oil security" has developed into "energy security" – the uninterrupted flow of energy at affordable prices, with elements like climate entering the picture, meaning the IEA now looks at CO_2 emissions, as more than 60% of all carbon emissions are energy-related, she said.

Energy security, she explained, has also expanded from primary fuels to energy efficiency and electricity, the latter of which comprises the IEA's focus and will power economic growth in the 21st century.

There is no scenario in which global electricity demand does not grow rapidly over the next four decades, she said, but the industry is stuck in the 20th century. For most power suppliers, the basic model still involves burning fossil fuels to spin turbines.

Now, the model is changing. Emerging markets, she said, are well positioned to champion this change. "They have the opportunity to leapfrog straight into clean, flexible and modern electricity systems and markets," she said. Meanwhile, established, stable markets, like those in Europe, are seeing weak demand growth and the slow collapse of a dominant business model.

Ms. Van der Hoeven said a new type of utility needs to emerge. Building modern, efficient and flexible electricity systems is the challenge for the sector.

She observed that the growth of renewables, a key element, had been driven by decarbonization policy, the push for them and the retiring of conventional power plants, but slow demand growth had put incumbent utilities under severe pressure because of oversupply and low wholesale prices, particularly in Europe.

By contrast, non-OECD countries with faster growing demand, she said, will comprise around 70% of new renewable generation by 2020.

This, she explained, illustrated the two kinds of electricity systems: the stable, where the market was not expanding, like in Europe, and the dynamic, that required rapid growth of capacity.

She said, "Both of these systems should aspire to the same goal: a clean, sustainable, efficient and flexible power system, but the roads they must take are different."

Dynamic systems, she said, have high demand growth, offering great opportunities for investors. The majority of new wind and solar plants would be built in such economies in the coming years, and flexible systems can be built from the beginning.

In Europe, where electricity demand growth has stagnated, renewables take part of the pie from incumbents with established capacity. "The renewables train is picking up speed and utilities have missed the opportunity to get onboard – only 7% of the investment in renewables in Europe has come from utilities, with the remaining 93% coming from banks, private equity funds and middle class households."

This, she said, meant that utilities will no longer solely be in the business of buying fuel and selling electricity: "The paradigm has changed to one of rapid response and flexibility," said Ms. Van der Hoeven, who explained the new model will revolve around selling energy services, of which one is energy efficiency.

> **❝ There is no scenario in which global electricity demand does not grow rapidly over the next four decades, she said, but the industry is stuck in the 20th century. ❞**
>
> **❝ A new type of utility needs to emerge. Building modern, efficient and flexible electricity systems is the challenge for the sector. ❞**
>
> Maria van der Hoeven,
> Executive Director, International Energy Agency (IEA)

"Energy efficiency and measures implemented by utilities can reduce operating costs and improve profit margins, and they can also lead to the deferral of new infrastructure investments."

Energy regulation, she said, must be made investor-friendly to facilitate a 21st century electricity system – one that balances producers' and consumers' needs while helping keep the average rise in global temperatures to no more than 2 degrees Celsius. "It's a system that features distributed power generation, both fossil-based and renewable, increased consumer engagement and demand-side management, utility-scale storage technologies, electrifies transport and centralizes power and heat generation."

"It's a system where all of the elements are integrated to optimize investment and operation, and while this increases complexity, the gains in efficiency and resiliency are tremendous. It's a system that optimizes the use of energy resources, and that incumbent utilities can take part in, or watch being built by new players as the traditional business model fades away," said the IEA's Maria van der Hoeven, who added that all players have a role to play in the transition.

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The big picture: the investor's perspective, key issues and trends – part 1

Participants:
Marie-Theres Thiell, Chief Executive Officer, RWE Hungary
Greg Kist, President, Pacific NorthWest LNG
Pierre Guiollot, Chief Financial Officer, GDF Suez Energy International
Pedro Azagra, Chief Development Officer and Member of the Executive Committee, Iberdrola

Moderator: David Gascoigne, Partner, Head of Power & Utilities, KPMG in the UK

❝ Topics of the future cannot be tackled all together by a single country in a consistent way; this is why I advocate for a cooperative energy framework in Europe, allowing technologies to be applied where they provide the greatest outcome. ❞

Marie-Theres Thiell, Chief Executive Officer, RWE Hungary

❝ Canada has an opportunity to export its natural gas via LNG to Asia – not just South Korea, Japan and Taiwan, but to address the entire demand of the region. ❞

Greg Kist, President, Pacific NorthWest LNG

In his introduction to a panel discussion entitled "The Big Picture: the investor's perspective, key issues and trends," David Gascoigne, Partner and Head of Power & Utilities, KPMG in the UK, said that delegates would hear about four sector players who were serious investors in the power and utilities sector.

Marie-Theres Thiell, Chief Executive Officer, RWE Hungary, recalled a popular book from 10 years ago, the Swarm, which she said had introduced the subject of collective intellect to the public agenda. She commented, "It made me aware of the power of cooperation – the group can achieve more than the sum of individual achievements."

With that in mind, Ms. Thiell noted that Europe is facing challenges in nearly every field, from economy to finance and even socially, all factors which affected the energy business, meaning that its players need to cooperate more to tackle new ways of producing, increasing competition and smart grids, among other examples. Technological disruptions, she added, are challenging the business model of the old energy landscape, but that doesn't mean that the objectives of affordability, security of supply and sustainability – the so-called "trilemma" – could be ignored.

Noting some European countries' single-handed approaches – nuclear plans in the UK, or Poland's reliance on coal - she suggested that every country in Europe could contribute what it does best and that joining forces would enable the addressing of all three priorities.

She said, "Topics of the future like big data, smart devices, microgrids and flexibility cannot be tackled all together by a single country in a consistent way; this is why I advocate for a cooperative energy framework in Europe, which involves many stakeholders, a political and regulatory environment favouring a market-based approach, allowing technologies to be applied where they provide the greatest outcome."

Each country, she said, should contribute with its specific geological, meteorological, societal and infrastructural strengths, which would allow for direly needed investments to flow into the sector.

Bringing a North American perspective to the topic was Greg Kist, President, Pacific NorthWest LNG, who outlined Canada's opportunity to export its natural gas via LNG to Asia – not just South Korea, Japan and Taiwan, but to address the entire demand of the region.

While noting global supply growth of LNG, and that many entrants including the US are looking to export their shale gas making for a lot of competition

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in the field, Mr. Kist said that Pacific NorthWest LNG is looking to capture the "pre 2020 timeframe" demand that exists now.

"To the extent that we miss that, there's probably going to be a period of 7-10 years where there's going to be a glut of liquefaction capacity in excess of demand," he explained.

To do this, he said there needs to be an efficient regulatory environment, which must also be robust. Canada, he added, is one of the closest suppliers to the Asian market. While stakeholder challenges exist, according to Mr. Kist the project will create approximately10,000 jobs right across the value chain and result in massive investment dollars and tax and royalty revenue for British Columbia.

Pierre Guiollot, Chief Financial Officer, GDF SUEZ Energy International, who provided an investor's perspective on fast growing markets, said that GDF SUEZ had been a major investor in the last 20 years. He reported that for the first time, in 2013, the company's division responsible for infrastructure and generation outside of continental Europe had made the biggest contribution to GDF SUEZ's profits: 28%. "This is, for me, a clear sign of the times," he said.

Today, according to Mr. Guiollot, 58% of the company's installed capacities are located outside of Europe, mostly in fast growing markets, and overall the company plans on investing EUR 6-8 billion per annum.

Since 2008, he reported, GDF has doubled installed capacity outside of Europe, entering five new countries in 2013 with construction started on six new projects. He said "This was not only the quality of teams, but the ability to build and maintain relations with local authorities and stakeholders. Through them we have a deep knowledge of local markets – a key differentiator to others giving us a powerful advantage."

Pedro Azagra, Chief Development Officer and Member of the Executive Committee, Iberdrola, who pledged to speak about his company's focus on big markets, observed the trend of industry consolidation: the US, for example, had reduced its number of utilities from 120 to 60. Divestments would continue, according to him.

He added that network intelligence is critical to link renewables, customers, demand, quality, efficiency – the key variables needed for customers and the regulators defending them.

"Probably in Europe the only generation that most of us, if any, are investing in right now is renewable," he contended, arguing that anything outside of that – like gas-fired generation in the UK – was a bet.

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The big picture: the investor's perspective, key issues and trends – part 2

Participants:
Hiroshi Sakuma, Executive Vice President, Group Chief Executive Officer, Global Environmental & Infrastructure Business Group, Mitsubishi Corporation
Lena Mangondo, Head of Legal, Independent Power Producer (IPP) Procurement Programme, National Treasury, South Africa

Moderator: Alberto Martin Rivals, Partner, Head of Energy and Natural Resources, KPMG in Spain

"We are not a pure utility player, nor pure financial investor, but rather a uniquely categorized investor that does not see capital gain in the short-term – but we're not a strategic investor from day one As power is a basic human need, Mitsubishi recognizes that the trust of local communities is vitally important to a project. That's why the company has developed expertise to be a strategic investor, while understanding the limits a foreign company has in a foreign market."

Hiroshi Sakuma, Executive Vice President, Group Chief Executive Officer, Global Environmental & Infrastructure Business Group, Mitsubishi Corporation

Moderating a session focused on new sources of energy from the perspective of investors, Alberto Martin Rivals, Head of Energy and Natural Resources, KPMG in Spain, said that the speakers, from a large private sector and from the government, would offer complementary visions of the development of new sources of energy.

In offering his perspectives on key issues and trends as an investor, Hiroshi Sakuma, Executive Vice President, Group Chief Executive Officer, Global Environmental & Infrastructure Business Group, Mitsubishi Corporation, noted that his company's business operates in virtually every industry like natural resource development and infrastructure investment, and is present in 90 countries.

He said that Mitsubishi had begun power business in USA since 1990s as one of the first companies to build IPPs, and now started expanding its investments into water, transport and LNG facilities. In the power sector, the company possesses 5,000 megawatts of generation capacity and 900 kilometers of transmission lines. Mr. Sakuma reported that Mitsubishi's strategy is to further grow its renewables business – wind farms and photovoltaics – as well as transmission business in Europe through its sub companies there.

According to him, whenever Mitsubishi is considering investments the company always checks if it meets both company goals and philosophy, in addition to it being profitable with the idea that good investments can contribute to society, while profit is short-term.

He explained, "We are not a pure utility player, nor pure financial investor, but rather a uniquely categorized investor that does not see capital gain in the short-term – but we're not a strategic investor from day one."

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As power is a basic human need, Mr. Sakuma added, Mitsubishi recognizes that the trust of local communities is vitally important to a project. That's why the company has developed expertise to be a strategic investor, while understanding the limits a foreign company has in a foreign market.

Lena Mangondo, Head of Legal, Independent Power Producer (IPP) Procurement Programme, National Treasury, South Africa, explained that her agency provides opportunities for private sector participants in South Africa's power sector, and that demand in the country is expected to grow from 250 terawatt hours to 3-400 by the year 2030.

Power crises, she said, are being addressed by the attraction of private participation in the sector, while legislative reforms are being installed to create a level playing field. Among the programs the IPP is involved in are one for renewables to the tune of 6700 megawatts.

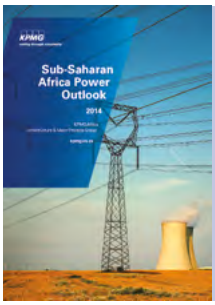
Ms. Mangondo noted the pleasing price trajectory of renewables, because over time there is increasing competition. She offered, "While the consideration from South Africa is that our population is predominantly poor, we are sensitive to high electricity prices, but also mindful of the need for investors to make returns."

Meanwhile, she reported that coal is another focus area that requires sufficient supplies. "While we support renewables, we are still keen to do some coal," she added.

Natural gas, she said, will address the intermittency of of renewables and the security of supply that South Africa needs, despite declining reserves. According to Ms. Mangondo, there is high gas potential, both offshore and shale gas prospects in the Karoo basin. Still, gas infrastructure is also scarce, but will be addressed by South Africa's master plan, she said.

❝ While the consideration from South Africa is that our population is predominantly poor, we are sensitive to high electricity prices, but also mindful of the need for investors to make returns. Meanwhile, that coal is another focus area that requires sufficient supplies. "While we support renewables, we are still keen to do some coal." ❞

Lena Mangondo, Head of Legal, Independent Power Producer (IPP) Procurement Programme, National Treasury, South Africa



Sub-Saharan Africa Power Outlook 2014

The second edition of the Sub-Saharan Africa Power Outlook, prepared by KPMG's Infrastructure & Major Projects Group in South Africa was launched at the conference. KPMG in South Africa also held an afternoon workshop on Day 2 of the event, titled **Africa priority projects roundtable discussion**. During the workshop chaired by Klaus Findt, Partner, KPMG in South Africa, executives from different African countries presented their most important projects in the power sector, including new generation assets and transmission projects.

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Engaging with customers

Participants:
Kerstin Meerwaldt, Head of Energy Management Strategy, BMW Group
Jon Webster, Chief Operating Officer, Group Digital, Lloyds Banking Group
Ari Sargent, Chief Executive Officer, Powershop

Moderator: Michael Salcher, Head of Power & Utilities, EMEA region, Partner, KPMG in Germany

“We do see that there is a value change happening – it's not just something we're talking about – and that goes along with sustainability, climate change and scarcity of resources.”

Kerstin Meerwaldt, Head of Energy Management Strategy, BMW Group

“We've transformed a traditional model, where a customer gets 12 demands for payment a year – they call them bills – to one where we get customers to log-on 64 times a year to have a positive experience – that's what gives them a sense of understanding and flexibility to transact.”

Ari Sargent, Chief Executive Officer, Powershop

Michael Salcher, Head of Power & Utilities, EMEA region, Partner, KPMG in Germany introduced a session dedicated to the energy sector's engaging with customers, their preferences, and communication. “Everything that we all know as private persons,” he explained.

The first speaker, Kerstin Meerwaldt, Head of Energy Management Strategy, BMW Group, gave a presentation entitled “Sustainability is the new premium - The Future of Mobility,” explaining how factors like urbanization and climate change are shaping her company's approach.

She stated, “We do see that there is a value change happening – it's not just something we're talking about – and that goes along with sustainability, climate change and scarcity of resources.”

Another important trend is digitalization. “Already today, real time data can be used to track energy flows and traffic information, for example.”

From these trends she said two important conclusions had been drawn: investments in new technology or adapting the product portfolio and a rethinking of the customer experience, resulting in “iconic change” for the automobile industry.

As an illustration of that, Ms. Meerwaldt said BMW is pursuing evolution and revolution at the same time, reducing the number of combustion engine automobiles it manufactures and increasing the amount of electric and hybrid cars. Speaking of the company's “360 Electric” program, she said the company tries to address every need and question of customers, like the access to charging stations.

One question she raised was, “how to react to change in customer expectations? Rethinking the customer perspective is something we take very seriously. Every customer deserves individual treatment.”

With that in mind, Ms. Meerwaldt showed a video portraying the very personal role played by a BMW “product genius,” from showing the features of a BMW to an entire family down to even making house-calls.

The electricity utility business is a radically different one in New Zealand and Australia, explained Ari Sargent, Chief Executive Officer, Powershop. From a business perspective, he said his company wants to address issues like increasing competition, regulatory pressure and the risk of technology disruption.

Powershop, he said, had chosen to be the disruptor. Proclaiming that the industry is particularly poor at engaging customers, he recalled that, starting with their marketing, it could not be dull or boring, but had chosen to be a consumer champion.

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"From our inception, we had the internal philosophy of bringing 'power to the people'," he explained, admitting it sounds a bit cliched. "We couldn't find any clearer words to describe what we were doing, both literally as an electricity retailer and figuratively in terms of our approach – our whole idea was to give control to our customer base."

Individual rules and regulations, said Mr. Sargent, are not a good recipe for a customer experience and that's why Powershop enables its consumers to monitor their power usage via a mobile application, save money and purchase lots at their convenience, meaning that clients log in to the company's system more than once a week on average, turning them into "raving fans."

Transforming a customer experience to one that builds a sense of control, he explained, is about taking masses of data possessed by the industry, turning it into insights and allowing customers to act on it. "We've transformed a traditional model, where a customer gets 12 demands for payment a year – they call them bills – to one where we get customers to log-on 64 times a year to have a positive experience – that's what gives them a sense of understanding and flexibility to transact, which is what control is all about."

Jon Webster, Chief Operating Officer, Group Digital, Lloyds Banking Group, contended that "Customers don't respect boundaries." He explained, "Our customers don't care about what inhibits a good customer experience."

This, he said, requires a change in thinking on the side of industries like banking or utilities, who segment customers into categories like "mid market" or "SMEs," while customers look into the mirror and see themselves as unique individuals with likes and dislikes. "We need to engage with them as a 'segment of one'," he said.

He gave the successful example of the "build a bear" toy workshops, a concept which contains elements of a toy store, theme park and arts and crafts fair, including stations for the construction of a teddy bear, including its outfit, stuffing it and naming it.

He explained, "The customer experience lies in the process of building the bear, not the product itself. We are in an experience economy – customer experience is the product."

This, he said, means moving beyond delivering what is sufficient to what customers really desire.

"We have to put desirability back into the design process," said Mr. Webster, who also listed feasibility and viability as key elements for today's customer.

"While customers look into the mirror they see themselves as unique individuals with likes and dislikes."

"We are in an experience economy – customer experience is the product. This means moving beyond delivering what is sufficient to what customers really desire."

Jon Webster, Chief Operating Officer, Group Digital, Lloyds Banking Group

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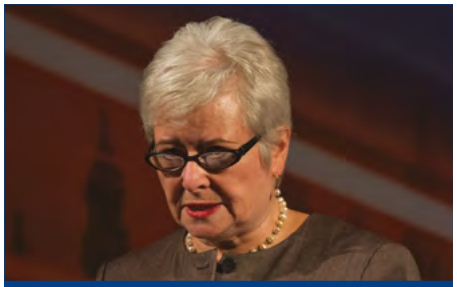
Market design and market reform

Participants:

David Newhouse, Senior Vice-President- Head of funds investments, EDF Invest - EDF Group
Werner Schnappauf, Senior Advisor, Bank of America Merrill Lynch in Germany / EMEA and Lawyer and Partner, GVW
Joan McNaughton, Executive Chair of the World Energy Trilemma for the World Energy Council (WEC)
Stefan Ulreich, Political Affairs and Corporate Communications Political & Regulatory Affairs, E.ON

Moderator: **Alistair Buchanan,** Chairman of KPMG's Power & Utilities Group in the UK



"The WEC survey finds no correlation between the degree of regulation and successful delivery against energy policy goals."

Joan McNaughton, Executive Chair of the World Energy Trilemma for the World Energy Council (WEC)

"The quest for renewable energies, is overcoming a counter-movement of increasing separation and nationalism that is currently sweeping across Europe."

Werner Schnappauf, Senior Advisor, Bank of America Merrill Lynch in Germany / EMEA and Lawyer and Partner, GVW

In a session dedicated to market design and reform, Alistair Buchanan, Chairman of KPMG's Power & Utilities Group in the UK, stated the intention to examine power and utilities' markets and their design, and determine whether markets are failing or, in fact, surviving, noting that there are concerns that the industry may have lost its way.

He recounted someone in the banking sector telling him that toxic press attacks on a bank had ceased once government ownership was introduced, and the financial institution was encouraged to re engage with consumers. For energy, Mr. Buchanan queried, "Is this a recipe for re nationalization, or part state ownership?"

Werner Schnappauf, Senior Advisor, Bank of America Merrill Lynch in Germany/EMEA and Lawyer and Partner, GVW, observed that the industry has lost its way: energy markets are either highly regulated and liberalized, but more or less nationally run.

He observed the increasing pressure on politicians to keep energy prices affordable, as in Germany where both citizens and NGOs are working to prevent increases given the feed-in tariff has reached an all-time high of EUR 24 billion per annum.

When Germany started the Energiewende, he recalled, 90% of people had supported it. "But, at the same time, 70% of people say they oppose higher energy prices."

According to Mr. Schnappauf, this all means that cost efficiency can only be achieved by more open markets and less regulation. With the goal of achieving 80% renewables by 2050, he said Germany must use the best locations, which involves Europe as a whole.

"Renewables are not bound to national territories," he remarked. "The sun shines intensely in the southern countries; the wind blows most forcefully along the coastlines and in the North Sea."

The quest for renewable energies, he explained, is overcoming a counter-movement of increasing separation and nationalism that is currently sweeping across Europe.

Are markets really working? asked Joan McNaughton, Executive Chair of the World Energy Trilemma for the World Energy Council (WEC), who explained that every year 'the WEC ranks 129 countries every year to see how they're faring in terms of approaching the "trilemma" - affordability, security of supply and economic competitiveness.

She reported that the UK is in the top 5, with a triple A rating, having brought on considerable generation and infrastructure assets, along with achievements regarding security of supply and reducing greenhouse gas emissions.

According to Ms. McNaughton, the WEC survey finds no correlation between the degree of regulation and successful delivery against energy

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policy goals. "High regulation need not necessarily mean nationalization, nor is it necessarily very desirable; certainly, a degree of liberalization – as much as you can have - consistent with regulation to get your policy goals is the best approach."

Five to seven years ago, such a debate on market reform would not even have occurred, opined David Newhouse, Senior Vice-President- Head of funds investments, EDF Invest - EDF Group, who recalled that then, in the midst of market liberalization and ambitious CO_2 targets, utilities were investing in new generation means and carrying out cross-border transactions on the back of a nascent European power market. Now, however, he explained it was more like "a tale of two cities."

Large-scale investments are still possible, he said, but with a caveat. "Current market prices which are both low and volatile do not provide the sort of visibility that a long-term investor such as a utility requires for large-scale projects by definition."

Still, he reported that there was a clear intention in the UK to develop low carbon technologies and that energy market reform aims to provide visibility to investments like the two new nuclear reactors EDF is considering building at Hinkley Point.

Meanwhile, he said there is good appetite coming from debt investors for green bonds financing renewable projects and for utilities with a good level of visibility.

Stefan Ulreich, Political Affairs and Corporate Communications Political & Regulatory Affairs, E.ON, outlined the three segments of generation: renewables, conventional generation via capacity mechanisms, or conventional generation subject to free markets, pointing out that the first two segments are purely national: "Most of them have almost no competitive element," which means that future generation is being built in both a national and deeply regulated way, he said.

It is a problem, Mr. Ulreich said, that households and industrial customers have to pay for renewables, and reducing the burden for industry is a challenge for governments. Security of supply will also remain a national topic, he added.

"In the end, if you're running out of gas, oil, or having a blackout the national government will be blamed – not the European Union, and this means in the end national governments will be trying to fix these problems, creating some kind of national legislation in order to avoid the problem."

While a European solution would be much more efficient, he said he did not expect this.

The panel concluded that we may have a crisis of security of supply or affordability in the next few years and that if we did then we needed to ensure that policy makers turn it into "a good crisis" for solutions.

"In the end, if you're running out of gas, oil, or having a blackout the national government will be blamed – not the European Union."

Stefan Ulreich, Political Affairs and Corporate Communications Political & Regulatory Affairs, E.ON

"Current market prices which are both low and volatile do not provide the sort of visibility that a long-term investor such as a utility requires for large-scale projects by definition."

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The moral and ethical challenges facing utility companies

Participants:
The Rt Revd Julian Henderson, Bishop of Blackburn
Alistair Phillips-Davies, Chief Executive, SSE plc

Moderator: David Gascoigne, Partner, Head of Power & Utilities, KPMG in the UK

The Rt Revd Julian Henderson, Bishop of Blackburn, Church of England, did not claim to bring expertise to a debate on the moral and ethical issues surrounding the power and utilities industry, but he did pledge to provide an ethical viewpoint, some questions and how they could potentially be applied. He noted one specific, though, that he is aware of the great debate in Lancashire over hydraulic fracturing.

Of the energy sector's moral compass that guides decision-making, he asked, "What underpins our current practice? Does your company know its starting point?" For example, the Church of England, he said, does not deify nature, but also is against its exploitation, making for a delicate balance.

Bishop Henderson outlined a number of benchmarks, including independent regulation, energy conservation, generosity, honesty, conscience and accountability. He explained the "stewardship benchmark," that the Christian faith shared with many other faiths, "which believes the world we live in is a created order of which we are stewards, accountable for our actions and called to be carers of the natural world that we've inherited – and then, passing it on to others who come after us."

He explained that this implies the wise and responsible use of resources, and an incentive to seek to develop renewable energy supplies. "An understanding of our place and our part in history requires a real commitment to exploring renewable forms of energy." This, he added, also includes the fight against deforestation, pollution of the oceans and an unwarranted exploitation of fossil fuels.

Via the benchmarks he outlined, Bishop Henderson said the industry can assess its performance as an industry, and be guided in the decisions it carries out in its core business.

With those top-of-mind, the activities of UK utility of SSE plc were under the spotlight, as recounted by company Chief Executive, Alistair Phillips-Davies. He said SSE is trying to be a problem solver, that, as a utility, it has a role to play in keeping the lights on and to "do the right thing."

As a provider of hydropower, for one, he reported that SSE takes measures to improve fishing stocks where the company has facilities, is a "living wage" employer, contributed GBP 9 billion to the UK economy last year, and is a responsible taxpayer.

Customers are at the heart of the company's business, explained Mr. Phillips-Davies, who spoke of a "priority care register."

"We have hundreds of thousands of customers who may be disabled or vulnerable in some way or form," he said. "We offer a lot of those customers, in conjunction with government, things like 'warm home discounts'. If they're struggling to pay, if they're making that choice between heating and eating, we have our own funds that we can make available to them as well."

SSE has also provided energy efficiency to hundreds of thousands of homes, according to him, which has partially contributed to a 20% drop in consumption in the last 5 years.

Other responsibilities the company has, said Mr. Phillips-Davies, include its commitment to health, safety and environment (HSE), and its responsibility towards shareholders.

Of profits, he said: "As I understand, some people believe that utilities should never have been privatized in the first place; however, while that is a perfectly legitimate view, it's not a view currently held by any major political party in this country today, so therefore I think we have a legitimate role in society."

Facilitator of the session, David Gascoigne, Partner and Head of Power & Utilities, KPMG in the UK, raised the question of a utility's responsibility for being able to judge those customers who say they're not able to pay their bills, and their level of vulnerability.

While his company doesn't cut anybody off over the winter months, or those with children, Mr. Phillips-Davies reported that its very difficult to properly determine the validity of social vulnerabilities. "We'd rather see a fuel poverty agency established in this country – we have too many obligations put on us, no right to ask people about their level of income or circumstances."

Fielding a question about how the Church of England viewed fracking and shale gas development, Bishop Henderson said the Church's role has been seeking facts and dispelling myths. "So it's been an educational role, sitting in the middle of it and saying 'well, now what actually is the truth about all this? Let's enable a proper debate about what the truth is as opposed to the myths are.' The Church has not come down on one side, in favor or against."

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Working together to deliver a simple transparent market for customers

Alistair Phillips-Davies,
Chief Executive, SSE plc

In his keynote address, Alistair Phillips-Davies, Chief Executive, SSE plc, spoke about the energy industry working together to deliver a simplified and transparent market for customers.

A company listed in the UK and serving up to 10 million people, SSE plc, he explained, it has many stakeholders, who are "often embroiled in battle with one another." Simplified transparent markets, he said, call for a more mature conversation involving industry, politicians and other individual stakeholders.

Noting that a market investigation by the UK's Competition and Markets Authority (CMA) was underway, according to him it is a "once in a generation opportunity to deliver reforms in the interest of customers and consumers."

He said his company has a clear history of leading change to the benefit of consumers, which had been illustrated by a so-called "building trust package" that had reduced the number of tariffs on customers bills from 60 down to three.

Trading all power in day-ahead markets, Mr. Phillips-Davies explained, has been a game-changer, providing massively increased liquidity to all participants and a clear benchmark price for forward trading. He offered, "The electricity wholesale market is now one of the most liquid in Europe."

"We're not afraid of being bold or leading change when it's the right thing to do. I believe this mindset is the necessary ingredient for a simple and transparent market."

He outlined the CMA's "Four Theories of Harm," hypothetical assertions about the market addressing the issues at hand. One of them was, "Can generation markets be gamed?" Mr. Phillips-Davies said the energy markets were dynamic, diverse and had strict rules in place.

As to how well customers were engaged, he asserted they were, but admitted there is room for improvement as they were the most important ingredient. At the start of the year, 80% of SSE's customers, he said, expressed their concerns about the future prospect of price rises in a survey conducted. He stated, "The cost of energy remains the most important priority. They know the unit price is going to increase to pay for the massive investment required and the reduction of carbon emissions."

While most customers, according to Mr. Phillips-Davies, say they support CO_2 reductions, they are not willing to pay for them, and that's why energy efficiency and a fair distribution of the costs of investment are important. He opined, "The costs should be borne by those who can afford it the most." This, he said, would lower utility bills and address energy poverty.

Meanwhile, energy bills should be simplified so that, for example, consumers have a notion of how much utility profits truly are making – less than consumers believe.

Engaging customers, he said, means that the industry must make their business more interesting, so that the end-user understands energy efficiency, for one. "Smart meters have a key role, giving a unique opportunity to empower customers and will give rise to more innovative products," he explained.

> **"We're not afraid of being bold or leading change when it's the right thing to do. I believe this mindset is the necessary ingredient for a simple and transparent market."**
>
> Alistair Phillips-Davies,
> Chief Executive, SSE plc

Mr. Phillips-Davies reported that smart meters must be installed into all homes by 2020, but only half of customers say they want them – this meant the industry has its work cut out to convince them of the benefits, like providing consumers information in a way that suits them: for some an in-home display, for others an application on their smart phones, to make energy more interesting and engaging.

Finally, Mr. Phillips-Davies mentioned SSE's "orangutan campaign" of TV adverts, which seek to engage customers on an emotional level on the subject of energy.

He concluded, "We have the right ingredients for a simple and transparent market – the shared ambition, an appetite for reform that is in the interest of customers, and have the route for positive change ahead of us. What we now need is a successful CMA investigation, which delivers an enduring framework."

Listening to the customer, he added, will continue to be key to those ends.

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Network businesses are facing transformation to become more efficient and customer centric

Participants:
Mel Kroon, Chief Executive Officer, TenneT
Basil Scarsella, Chief Executive Officer, UK Power Networks
Bill Thompson, Group Regulation Manager, EirGrid plc

Moderator: **Matt Firla-Cuchra,** Partner, KPMG in the UK

“A reliable network is crucial because liability costs are so much higher than the cost of the energy supplies themselves.”

Mel Kroon, Chief Executive Officer, TenneT

“While we've delivered significantly in the important parts of efficiency and customer service, the focus now is what the future's going to look like.”

Basil Scarsella, Chief Executive Officer, UK Power Networks

Network businesses facing transformation to become more efficient and customer-centric was the focus of a session introduced by KPMG's Matt Firla-Cuchra, Partner in the UK Power & Utilities practice, who listed key issues like required investments, cross-border integration and efficient operations.

As the Chief Executive Officer of TenneT, speaker Mel Kroon said his company, which now has an asset base of over EUR 12 billion, had been one of the first to establish a network between Germany and the Netherlands. This, he reported, has resulted in increased efficiency and the business being more customer-centric.

A reliable network, he explained, is crucial because liability costs are so much higher than the cost of the energy supplies themselves. He added that regulation is important, but there needs to be a system that encourages investments. Ninety percent of TenneT's portfolio comprised new investments, according to Mr. Kroon, who said the company was growing at a rate of 14% per year.

He commented, “That's mainly caused by the investments the grids need – they're required because of renewable energy, which is not always in the places where the former power plants were.”

TenneT, he said, had a strategy of “spread and store,” to send power where it's needed, like in Stuttgart and Munich where consumption was higher.

From a market review of prices on the continent, Mr. Kroon noted that there is a tendency of prices between countries converging and going down. “The reason for that is clear – the development of wind and solar in Germany, which has a marginal cost of close to zero, has a big reducing effect on the prices in Germany; secondly, the gas prices in the first half of 2014 have decreased.”

In that context, he said it was TenneT's goal to build infrastructure over the border and improve the system to facilitate the prices coming together as much as possible.

Since networks had been privatized 20 years ago, the business is all about making sure the lights don't go out, according to Basil Scarsella, Chief Executive Officer, UK Power Networks, who offered that in the last decade the reliability of the network has improved significantly, customers receive better service, and costs have been reduced for his company's 20 million customers.

“While we've delivered significantly in the important parts of efficiency and customer service, the focus now is what the future's going to look like,” he explained, considering that customers

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will all have solar panels and electric vehicles and want to interact with distribution companies in a different way than in the past.

Regulation, he opined, has also changed, moving away from the tradition of cutting costs and towards revenue equalling incentives, innovations and outputs. "This is saying to the network operators, 'your revenue will depend on incentives that the regulator offers, and those incentives are largely based on customer service and reliability of the network'; revenue also depends on the innovation that you can bring to the market; and to deliver the outputs: the health of the network, reliability and improved customer service," explained Mr. Scarsella.

Bill Thompson, Group Regulation Manager, EirGrid plc, told of the challenges of operating a transforming power system, with an increasing penetration of renewables and the requirement for associated high voltage infrastructure.

He noted Ireland's ambitious renewables target of 40% by 2020, which is high in terms of intermittent and asynchronous generation – 37% wind, without hydro back-up like Scandinavia has. Because of this, he explained, the country regularly meets 50% of its power demand via non synchronous generation and this is at the leading edge in Europe.

He reported, "We're investing in a programme of transformation and change to take the level of non synchronous penetration from 50% to 75%, which will be necessary if Ireland is going to meet its 40% renewables target."

He explained that Ireland is leading in terms of wind and renewable integration and that EirGrid is looking at all of the operational tools, policies, systems and challenges in order to deliver higher levels of renewable penetration. "It is only if these challenges are embraced that investors will be able to invest in the necessary generation to meet our targets" he said.

"Ireland is 'an island off of an island' and that in general makes our energy more expensive. As a result Ireland must equip itself to harvest the resource that Ireland has in terms of wind, and in interconnection with other markets. With interconnection Ireland will be able to cheap wind energy when it's available, and to get the benefits from other markets when it's not," explained Mr. Thompson.

Similar to addressing the priorities of the "trilemma," in terms of infrastructure and network development in Ireland, one also needs to balance the technical requirements, the environmental cost and the actual capital cost, he concluded.

"Ireland is 'an island off of an island' and that in general makes our energy more expensive. As a result Ireland must equip itself to harvest the resource that Ireland has in terms of wind, and in interconnection with other markets. With interconnection Ireland will be able to cheap wind energy when it's available, and to get the benefits from other markets when it's not."

Bill Thompson, Group Regulation Manager, EirGrid plc

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The shape of global water industry and lessons learned if investment is to be attracted

Participants:
Stuart Siddall, Chief Financial Officer, Thames Water
Juan Antonio Guijarro, Chief Executive Officer, Aqualogy (SE Group)
José Luis Diaz-Caneja Rodriguez, Managing Director, Acciona

Moderators: **Mary Hemmingsen,** Partner, Advisory Services and National Sector Leader, Power & Utilities, KPMG in Canada
Simeon Bastien, Global Head of Water, Partner, KPMG in France

“Tidway Tunnel is a key project to enable us to clean up the Thames, reducing the raw sewage by about 23 million cubic meters.”

Stuart Siddall, Chief Financial Officer, Thames Water

“Considering that global urbanization will rise from 50-70% by 2050, conservation of water supplies and waste water treatment are all issues that need to be carefully managed.”

“We must allocate assets properly to be able to attract financing.”

José Luis Diaz-Caneja Rodriguez, Managing Director, Acciona

To show the parallels (and the differences) between the power and utilities businesses and the water sector, and how the two attract investment, Mary Hemmingsen, Partner, Advisory Services and National Sector Leader, Power & Utilities, KPMG in Canada, suggested that the session “tap into water” to relate the key elements of a framework for growing investment and improved water access, borrowing features from the power and utilities sector and the lessons learned.

Noting that both industries require generation and collection activities, and both are infrastructure intensive for transportation and distribution, she pointed out their increasing focus on conservation and recovery efforts as well as the exciting opportunities in the developing world.

Public-private partnerships in the water sector are offering steady, predictable returns, according to her. As incomes across the globe increase, she opined that expectations will be higher, both for water and power and utilities. The challenge will be monetization of delivery and service as business models evolve and governments introduce private capital, with privatization currently taking place in countries like Chile or the UK.

Ms. Hemmingsen reported, “Countries are starting to creatively encourage private capital and expertise to share in the risks and rewards of the water sector.”

“As the water sector evolves, will the same transition be seen in the privatization ushered in for the power sector to a more desegregated, distributed model?” she asked. Water and the energy industry have a lot to learn from each other, she concluded.

Stuart Siddall, Chief Financial Officer, Thames Water, reported that his water company has gone beyond “business-as-usual” in tackling the Thames Tideway Tunnel project, a GBP 4.2 billion sewage treatment project that is the biggest investment occurring since the company's privatization.

Of the Tidway Tunnel, which will be 25 kilometers long and up to 70 meters under the city of London, he explained, “This is a key project to enable us to clean up the Thames, reducing the raw sewage by about 23 million cubic meters.”

Mr. Siddal reported that his company has been working together with the government, regulatory agency and the treasury to develop a new structure to deliver the project, but that the risk can't be borne solely by the private sector, so it has been “ringfenced” as to preserve the company's investment rating.

Meanwhile, he noted that Thames Water is typically accused of not paying tax, but it looks this way, he explained, because the company invests enormous sums into capital assets.

Juan Antonio Guijarro, Chief Executive Officer of Aqualogy (SE Group), explained that access to water is becoming a challenge due to population growth, urbanization, food demand increase, pollution and climate change. Wide regions are already suffering from water scarcity, being unable to secure water supply for all their needs. According to him the picture is worsening and not enough is being done.

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In order to face these problems, Mr. Guijarro said huge funding (that public bodies cannot afford today) is required and therefore the water sector has been touted as a great opportunity for investors, but this has not come about although financial players are willing to invest in water. Sometimes this is due to a lack of clear and safe legal framework or reliable regulations, sometimes it´s because of the opposition to private sector involvement in managing such a basic human need, or it can be the gap between water rates and cost recovery criteria.

As important as financing is knowledge. Technology and "savoir faire" can bring a lot of value by optimizing operations of existing asset base. This knowledge is available as well, but few channels to deliver this integrated expertise, like the PPP, have been implemented.

According to Mr. Guijarro the fact is that governance is failing and governance is the key. It should involve all stakeholders, considering environmental, financial, social, technological and managerial aspects, balancing goals trade off and setting out realistic targets and adequate risk and responsibilities allocation.

On the managerial side, Aqualogy's value proposition is based on innovation. Specifically innovating in new business models to channel solutions to water problems will be essential. Integrating solutions to clients on a one stop shop basis and with performance based contracts will facilitate access to knowledge.

José Diaz Caneja, General Manager, Acciona Agua, explained that his company has an overlap of both sectors, being involved in both water and renewable energy.

There is a perception, he explained, that water is a free good – but it's not free but an inexpensive good. Additionally it is required to clearly define and inform about the cost of treating it for being able to supply it and properly dispose it later on. However, if its price rises serious social impacts result, according to Mr. Diaz-Caneja.

Considering that global urbanization will rise from 50 to 70% by 2050, conservation of water supplies and waste water treatment are all issues that need to be carefully managed, he said.

The mining sector, he explained, required huge water resources, which Acciona Agua is supplying and would like to play a key role on it.

Of the financing of such water projects, Mr. Diaz-Caneja said, "If all industrial clients are looking for this, it means they will be keen on financing the water, treatments and the businesses around their core activities."

Still, he admitted that water is not a sector that likes risk, that investors prefer reliability. "We must allocate assets properly to be able to attract financing," he said, adding that public funding support, as bilaterals and multilateral financing institutions is crucial, because private money usually followed it.

Having contributed to the session and a pre-conference webinar. KPMG's Simeon Bastien, Global Head of Water, lead the session Q&A.

❝ Access to water is becoming a challenge due to population growth, urbanization, food demand increase, pollution and climate change. Wide regions are already suffering from water scarcity, being unable to secure water supply for all their needs. According to him the picture is worsening and not enough is being done. ❞

Juan Antonio Guijarro,
Chief Executive Officer, Aqualogy (SE Group)

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Global shocks reflected in Europe's energy policies

Charles Hendry, Former Minister of State for the Department of Energy and Climate Change (DECC), UK

To conclude KPMG's Global Power & Utilities Conference, Charles Hendry, Former Minister of State for the Department of Energy and Climate Change (DECC), UK, gave a wide-ranging speech on how Europe's energy policy must withstand global shocks, despite the fact that most policies were formulated at the national level. Mr. Hendry noted, for example, recent unforeseen challenges to new technology like deepwater drilling operations from the BP Macondo oil spill, and how Japan's nuclear reactor disaster at Fukushima had increased worldwide demand for natural gas.

Regarding meeting the goals of the European energy policy "trilemma," he said the priorities are constantly changing – now security of supply has risen to the fore as it had in 1973, he recalled, when Saudi Arabia had raised the price of oil from US$ 3 to US$ 12 per barrel.

"It sent the world into shock," he explained. "We reacted in Britain, having fortunately discovered gas and therefore we moved very significantly towards gas-powered generation; France went nuclear; Germany with an ambivalence did some nuclear, but started to go down the renewables path; Denmark had no choice but to stick with coal, but then looked at how it could capture the heat."

> **❝ It is crucial that investors believe there is something more that they'll receive, like guaranteed prices, which shouldn't be assumed to be subsidized. ❞**
>
> **Charles Hendry,** Former Minister of State for the Department of Energy and Climate Change (DECC), UK

He said their reactions reflected each country's access to resources. Today, Britain is too small to be looking at how to solve its own energy challenges and should also be pursuing cooperation with its neighbors, according to Mr. Hendry.

The '70s oil crisis also showed, he explained, that energy meant power – and it is no different today, as there is a new generation of countries that are now able to export their energy.

One example Mr. Hendry offered was Ethiopia's interconnection and export of geothermal and hydro energy to Saudia Arabia. "Interconnection means that a country which, until now, has had very few really strong economic prospects, could become a major energy exporter."

Others were also emerging. China, he noted, made up one-third of new global wind capacity last year. "The Chinese see it as a new business opportunity and want to lead the technology."

Meanwhile, greenhouse gas emissions targets are becoming more elusive, as countries' commitments seem to fall apart as they get closer to elections, explained Mr. Hendry, who added that signals must be right to enable the building of new energy investments.

He explained, "Investment in low carbon is very lumpy, the investment is heavily up-front – if you're building a new gas-powered power station you'll spend GBP 800 million to build it, but the costs will be primarily in the gas which you buy to run it with, whereas if you're building an offshore wind farm, it'll be GBP 3 or 4 billion per gigawatt, a new nuclear power station will be GBP 6-7 billion per gigawatt, so the need for a financial signal is imperative if companies are going to invest."

> **❝ Regarding meeting the goals of the European energy policy "trilemma," the priorities are constantly changing- now security of supply has risen to the fore. ❞**

It is crucial, he added, that investors believe there is something more that they'll receive, like guaranteed prices, which shouldn't be assumed to be subsidized.

"Such measures," he explained, "should address UK security of supply for a generation to come."

But the bigger issue in relation to security of a resource and supply is diversity, according to Mr. Hendry, who recalled that Winston Churchill had said the same thing of oil 100 years ago.

Despite the interconnections that Europe has, like the UK's LNG facility to link it to Qatari gas (providing 40%), he opined that Europe needs to look at how to enhance its resource security. "That means more sources of gas into European markets – gas from Cyprus and Turkey, but also more routes for Russian gas not through Ukraine."

The UK, contended Mr. Hendry, has only 14 days of gas storage, and is lagging behind in gas storage; meanwhile, the depletion of indigenous hydrocarbons will make it necessary to investigate the shale opportunity, which could make a useful contribution and play a role in Britain.

As security of supply has come to the forefront of importance, he concluded that the UK also needs to lead technologies like offshore wind or carbon capture storage to provide exciting solutions.

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If you have further questions relating to the topics discussed at the KPMG Global Power & Utilities Conference 2014, please do not hesitate to contact the chairmen or the moderators of the conference.

Chairmen of the KPMG Global Power & Utilities Conference 2014

The Big Picture: the investor's perspective, key issues and trends – part 1 • The moral and ethical challenges facing utility companies

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The Big Picture: the investor's perspective, key issues and trends – part 2

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Network businesses are facing transformation to become more efficient and customer centric

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Engaging with customers

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The shape of global water industry and lessons learned if investment is to be attracted

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Market design and market reform

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Breakout session chairs

Future of Nuclear Power – Opportunities and Challenges

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Power Outlook Sub Saharan Africa

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Thinking the Unthinkable – Disruptions, wildcards, and discontinuities for the energy sector

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KPMG member firms' 12 Power & Utilities Centers

What sets **KPMG apart**

Our **business model** enables deep **industry experts** to work side by side with **business leaders** to develop forward-thinking strategies using highly **specialized teams** tailored to the specific **business needs** of **clients.**

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Leading the field means more than just having a strong client base. KPMG member firms currently provide services to many of the world's leading Power & Utilities companies. Being a leader also means investing in the development of thought leadership, spearheading industry debates to help keep our firms' clients at the forefront of progressive thinking, and giving our people the skills and knowledge to provide the quality and customized services clients require.

Floating LNG: Revolution and evolution for the global industry?

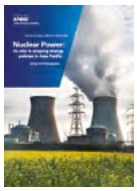
After a lengthy period of R&D starting in the 1970s, floating LNG (FLNG) plants are on the verge of entering service, with five due to begin operations between 2015-19. Sixteen other FLNG projects have been announced as probable and 21 as possible.

Taxes and Incentives for Renewable Energy

KPMG's Taxes and Incentives for Renewable Energy—2014 is designed to help energy companies, investors and other entities stay current with local country policies and programs supporting renewable energy around the world.

European Power Utilities Report – Q3 2014

Overview of the last quarter evolution in European Power & Utilities sector.

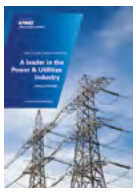


Nuclear Power: its role in shaping energy policies in Asia Pacific

This report provides an overview of the current Asian nuclear power market, noting growing demands for nuclear power in the region.

Infrastructure 100 World Markets Report

In an age of austerity and with funding in short supply, governments must make difficult choices about where to focus infrastructure spend. Balancing the aspirations of a nation with the need for true social benefit is not an easy challenge.



A leader in the Power & Utilities industry

Practitioners are on-site in 155 countries, advising global Power & Utilities businesses, state-owned providers, national businesses and service companies worldwide.

No paper chase: Transforming risk management at energy and natural resources companies

Energy and natural resources companies are facing an evergrowing array of risks. Today's complex business environment requires an even stronger ability than before to master risk management, but companies are falling short in important areas.

The Agile Utility

An approach to establishing a thriving business in a changing and uncertain environment and more on the key forces of change impacting the power and utility industry in North America

Green Energy 2014

Over the last few years we have seen a strong evolution in the renewable energy sector, from investment value being created upstream and throughout various elements of the supply chain, to value being more concentrated downstream at either the project level, or developers and/or financiers enabling utility and distributed generation assets.

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Launched in 2007, the GEI is a worldwide knowledge-sharing forum on current and emerging industry issues. This vehicle for accessing thought leadership, events, webcasts and surveys about key industry topics and trends provides a way for you to share your perspectives on the challenges and opportunities facing the energy industry – arming you with new tools to better navigate the changes in this dynamic area. A regional focus to the GEI provides decision makers with tailored insight within the North and South America, Asia Pacific and Europe, Middle East & Africa regions.

To become a member of GEI visit **kpmg.com/energyemea**

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The KPMG Global Energy Conference

The 2015 KPMG Global Energy Conference, presented by the KPMG Global Energy Institute, will take place on May 20-21, 2015 in Houston, Texas.

The GEC will bring together industry professionals from around the globe to discuss challenges affecting the energy industry.

The 2015 conference will feature keynote presentations by Jack Welch, Former Chairman and Chief Executive Officer of General Electric and Barbara Corcoran, Chairman of Barbara Corcoran, Inc. and co-host on ABC's Shark Tank. The conference will feature tracks that focusing on the Oil and Gas, Power and Utilities and Regulatory concerns.

For more information, please visit **kpmg.com/energy**

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Join us for the fifth annual KPMG Global Power & Utilities Conference which will be held on 28-29 October 2015 in Madrid, Spain.

Registration opens in April 2015

To register please visit:
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If you have any queries email the organizing team at **gpc@kpmg.com**

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If you have any queries regarding the event, please contact the organizing team at gpc@kpmg.com

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