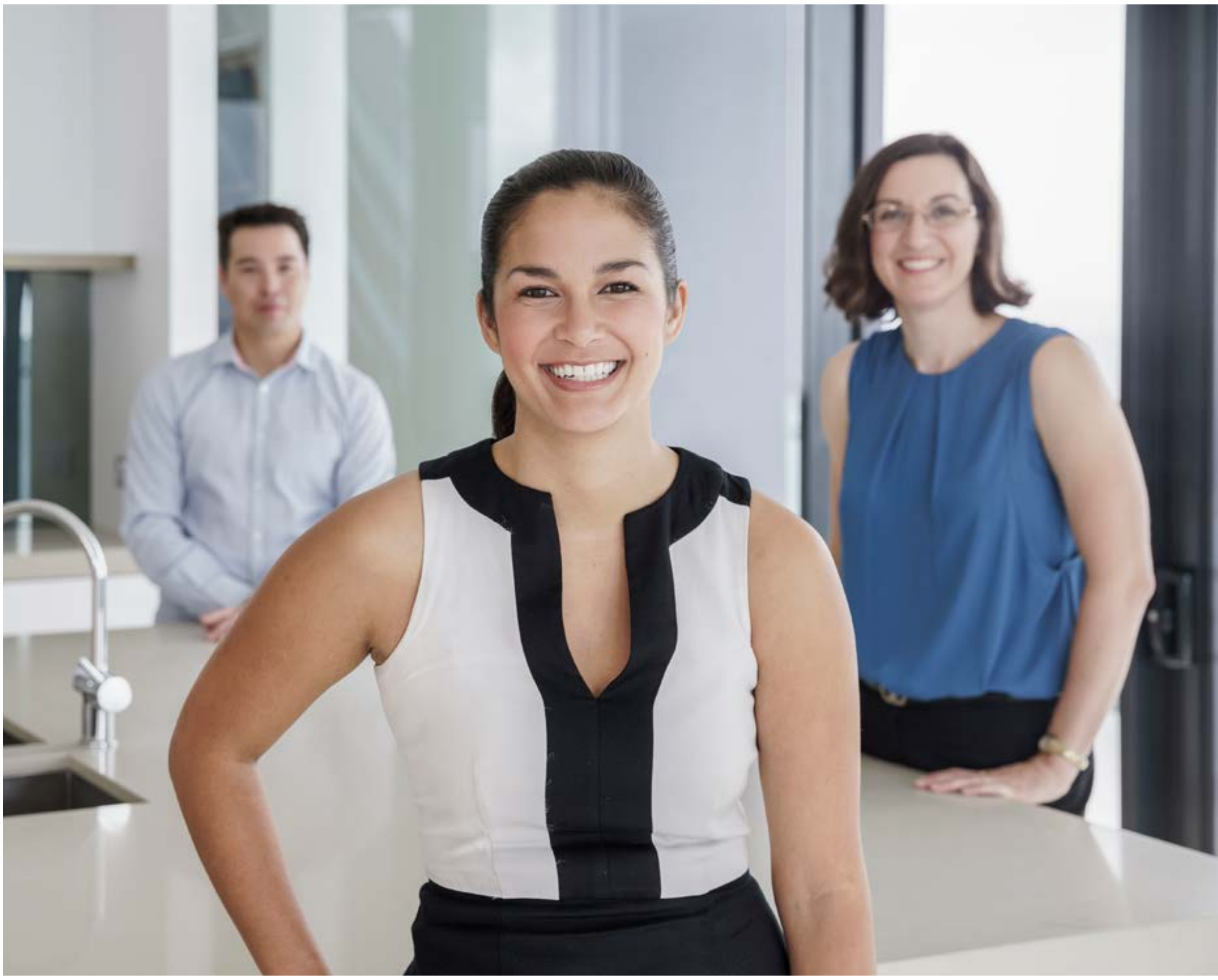
PwC power & utilities roundtable discussion paper

Strategy, financing and customer engagement in the new energy world



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The roundtable

More than 60 senior executives and experts from 18 different countries and all five continents gathered in May 2016 in Berlin, Germany for PwC's roundtable on the challenges facing utility company C-suites as they seek to stay ahead in an era of energy transformation. The speakers and moderators were:

Mubarak Abdullah Al Khater	*Executive Director New Business Development, Saudi Electric*
Chuck Darville	*SVP - Marketing and Programme Management, Southern Company*
Thomas Duveau	*Head of Business Development, Mobisol*
David Etheridge	*Global Power & Utilities Advisory Leader, PwC US*
Tom Flaherty	*SVP, Strategy&*
Jeroen van Hoof	*Global Power & Utilities Assurance Leader, PwC Netherlands*
Nicolas Mahler	*SVP Operations Support, Deutsche Telekom*
Chris Manser	*Head of Infrastructure Investments, Swiss Life Asset Management*
Paul Nillesen	*Power & Utilities Advisory Leader, PwC Netherlands*
Ian Peters	*Director of Customer Facing Strategy, British Gas*
Christof Sagasser	*Director of Corporate Strategy, Mergers & Acquisitions and Investment Management, Mainova AG*
Gopal K. Saxena	*Director, Reliance Energy, BSES Rajdhani & Yamuna Power*
Norbert Schwieters	*Global Power & Utilities Leader, PwC Germany*
Dr. Marc Spieker	*Project Lead One2Two, E.ON*
Teresa Vernaglia	*SVP, AES Brazil*

Introduction

A new market environment is confronting power and utilities companies and the demands on top executives are intensifying. Welcoming participants to the roundtable, Norbert Schwieters, PwC's Global Power & Utilities Leader, observed: "Energy transformation is altering company horizons and the boundaries of competition in the sector are becoming more ambiguous. Business models need to change and, most importantly, the C-suite needs to be ahead of these developments. The roles that they bring to the table, the way decisions are made and the overall focus of the team all merit re-evaluation."

Schwieters emphasised: "Relationships, responsibilities, interactions and decision-making are becoming more complex and new capabilities are rising to the fore. It is important to look at the implications for both inward- and outward-facing relationships." David Etheridge, PwC's Global Power & Utilities Advisory Leader, took up the change theme: "It's an exciting time in our industry. There's a number of new business models. Companies are shedding assets and adding assets. They are creating new products, eliminating other products, and trying to serve customers in different ways. And they're financing their business with varying and new forms of exchanges."

But with transformation comes risk. Etheridge pointed out: "In the US we have a number of companies that are facing bankruptcy. They made big choices and those big choices failed. In fact, strategic choices caused their failure." New technologies, rapidly-changing customer demands and new entrants into the power market are among the principal drivers of change, observed Etheridge. "It's all creating an opportunity for innovation but there's also the danger that the key shareholder value you've created in the past gets leached away with new entrants taking the best of what you have and leaving you only the worst of what's left."

The roundtable is the latest in a number of initiatives being delivered by PwC's global power and utilities centre of excellence to assist companies in this fast-changing environment. A series of reports examine the various market and business models that could emerge in the power sector, the implications of the new energy ecosystem for customer strategies, and the increasing importance of innovation for success in the sector.[1] And in a new book, PwC's Strategy& looks at how winning companies can close the strategy-to-execution gap that so often is a key challenge facing the C-suite.[2]

This report gives a flavour of the content from what was a very wide-ranging roundtable discussion. We focus our report of the discussion on:

1 http://www.pwc.com/gx/en/industries/energy-utilities-mining/power-utilities/publications.html

2 P. Leinwand, C. Mainardi and A. Kleiner, Strategy That Works, 2016.

A new strategic compass: company and customer transformation

Germany's decisive shift away from fossil fuels and nuclear power towards renewables is changing the industry in ways that few would have predicted just a few years ago. It has led to one of the most far-reaching transformations in the power utility world, with the separation of E.ON's operations into two independent companies. E.ON CEO Dr. Johannes Teyssen has described the change as "perhaps the most ambitious reorganisation of a European company"[3] and the roundtable was able to hear first-hand from Dr. Marc Spieker, the senior E.ON executive leading the One2Two spin-off project team.

Figure 1: ***The changing energy world***

Conventional energy world	New energy world
System-centric	Customer-centric
Security of supply	Sustainability
Global/regional perspective	Local proximity
Large scale, central	Small scale, distributed
Conventional technologies	Clean technologies

Source: PwC roundtable presentation by Dr. Marc Spieker, project lead One2Two, E.ON, 13 May 2016.

From vision to implementation

The process began in 2013 with a vision process led by the CEO. "At that point no one had a clue where this would end up," remembered Spieker. "It was a very broad process with hundreds of workshops involving employees from all levels reaching out to business partners, to customers, advisors, etc. We essentially had two conclusions – first, whatever we do going forward it has to improve people's lives and, second, we want to be the partner of choice for our customers when it comes to energy." A smaller group of top executives then hammered out the key strategic choices facing the company, mindful of an environment that is increasingly characterised by two energy worlds (see graphic).

There was an increasing awareness that long-term success in this changed environment would require clearly focused and distinct companies. "We see completely different challenges in these energy worlds," said Spieker. "Different capabilities are required to succeed and we do not believe that it makes sense to keep the management teams of these businesses together because we believe there is much more dynamism and much more force if we let the companies run independently."

As part of the new strategy E.ON aims to split up into two totally independent companies – with one, E.ON, focusing on renewables, the grid and customer solutions and the other, Uniper, on conventional power generation, gas and trading. The German nuclear power activities will remain with E.ON. The two companies have been operating independently of one another since the beginning of 2016, with the spin-off set to be completed in the second half of the year, subject to approval at the annual shareholders' meeting in June.

3 CEO letter to shareholders, E.ON Annual Report 2015, 9 March 2016.

But Spieker emphasised that the journey leading up to the separation has been much longer, going back some three years and, during that time, a constant focus on the strategy behind it has been all-important: “It’s very easy for people to think that the transaction equals the strategy and that can be pretty dangerous. You’ve got to start with a very clear strategy and always use that as your compass to guide decisions.” He also stressed that “a spin off like ours is not an M&A transaction, it is a group transformation programme and is significantly different from how we would have run an M&A transaction.”

A focus on communication

The transformation taking place is massive. It involves more than 60,000 full-time-equivalent employees and over 1,000 legal entities. “We managed to keep the whole preparation of this announcement confidential with no leakage,” Spieker observed. “Two months ahead of the announcement, we essentially stopped to work on the transaction and we put 100% focus on communication. It meant that when we made the announcement, the management team could spend every day for the first three weeks going out externally and internally to explain and build support for the transformation.”

Among the lessons that Spieker emphasised is the importance of continual focus and discipline: “It is a massively complex and long-lasting exercise, so you’ve got to maintain a lot of focus and discipline. If you don’t, you will get overwhelmed by all the interdependencies that you will be faced with and you will never be able to manage your timeline.” He also stressed the need to recognise the dynamic nature of transformation: “There is no cookbook; it is not like an M&A transaction with a relatively clear recipe for how to do it. Of course, it is important to prepare things in advance with pre-structuring plans. But you need people who can react dynamically as things develop on the ground and be ready to revise your plans as the focus will shift over time.”

From utility to customer-centricity: a view from telecoms

Deutsche Telekom is one of the world’s leading integrated telecommunications companies, with some 156 million mobile customers, 29 million fixed-network lines, and more than 18 million broadband lines. Nicolas Mahler, Deutsche Telekom’s SVP Operations Support, offered some insights on the parallels with the energy sector. Like energy utility companies, telecoms companies have evolved from state utility roots. They also combine engineering and infrastructure with the need to now be strongly customer-focused and in an increasing variety of marketplaces.

“We are digging networks into the earth all over Germany. It’s really hard work but if you enter our shops we appear like we are selling fast-moving consumer goods,” said Mahler. “That’s the inherent conflict in our DNA that we always have to manage.” He outlined some of the most important steps in Deutsche Telekom’s move from utility to customer-centricity. It is a journey that has taken them to a world champion ranking in customer service metrics such as wait times, becoming European iPhone sales champion and has increased the company’s brand value dramatically to number two position, second only to BMW.

So, what does it take? “Investing in people. That’s for sure,” said Mahler. “You cannot over-invest in people. Next thing is investing in real leadership. You’ve got to invest a lot in how you lead your team, how you focus on customer centricity, what is important and how you manage your daily life with the team. You have to have a great culture, a culture which is instilled with openness, fair feedback, willingness to admit to failures, and seeing failures as an opportunity to grow.”

“In the end, you have to have a momentum in your team, among your leaders, so that you get self-propelled change with people knowing where they are going as a team. Ten years ago nobody would admit to a failure at Deutsche Telekom because everybody was afraid of being punished. You’ve got to change that culture and encourage ideas. If it doesn’t work out, then you can take something positive out of it and learn from it.” Mahler concluded by highlighting the importance of also having a customer programme at the heart of company change. He highlighted Deutsche Telecom’s ‘kunde zuerst’ K1 or ‘customer first’ programme in Germany. At its heart is the ambition of ‘killing bureaucracy’, making things quick and easy, and delighting the customer.

Q&A

Q: There are tens of thousands of people inside E.ON. What was most important in convincing people and getting them on the same page?

Dr. Marc Spieker, project lead One2Two, E.ON: There is no silver bullet answer. It is a combination of many things. Certainly, it's about involvement. You need to involve your people and one of the key success factors for us is that we had a two-year process before we actually came to this massive corporate portfolio change. Management went out and took a lot of time in workshops to create a common understanding among employees. It's also about repositioning E.ON, making us more customer-focused, and that is more a cultural transformation than anything else. Every executive at EON is obliged to participate in customer immersion sessions several times a year. Of course, the structural shake-up also helps change the mindset. Anyone who hasn't understood it before, now realises we really mean it seriously.

Q: You've talked about changing the mindset and becoming more agile and customer-oriented, but are you relying on doing that with the same people?

Spieker: It's always a big question how far you can really change the mindset of executives and whether you actually need to exchange a considerable part of your management team. If I look back over the last three or four years, there has been considerable change. Of those in leading positions, it's all people either from the outside or internal people with a very strong background from downstream businesses in the group. You don't always need people from the outside. But you need to make sure that you get those people in your company with the right experience and exposure.

Q: What's the future of infrastructure when services like WhatsApp and other over-the-top services enable users to consume lots of capacity without paying for the capex and networks that carry it?

Nicolas Mahler, SVP Operations Support, Deutsche Telekom: It's a key question for all telecoms operators all around the world. When WhatsApp with its team of just 55 staff was sold for a reported US$19bn to Facebook, part of that US$19bn was exactly the money that we are missing to make the investment in the network. Building networks like railway, utility or telecoms networks contributes to society, so the funding of them has to be solved. Companies that are using networks for free have to pay for the service. The alternative is that network providers have to consider different classes of service but there are regulatory obstacles to that route.

Q: In the energy sector, we are very busy with energy management and the smart home. How do you view that from a telecoms perspective and it is in your field of play?

Mahler: Smart home is a pot of gold that we are all aiming at. It is one of our key priorities but it is a complex product to sell. There are so many devices, software, UIs and APIs. People don't come into our stores, looking to buy 'smart homes'. They're looking for phones and you have to explain what 'smart home' services can do. Partnering in this area and on the smart metering side of things is a subject for discussion.

Technological and business model change in different markets

"Power utility companies around the world are revising their business models, guided by their appraisal of the likely future direction of their own markets, how these markets are affected by technological advancement and what this means for their strategies. Change is happening the world over but each location presents different challenges," observed PwC's Paul Nillesen as he introduced the roundtable's first panel discussion. The panel gave participants the chance to hear from key players in the Middle East, India and Africa.

Saudi Electric is the largest utility provider in the Middle East, serving the Kingdom of Saudi Arabia and neighbouring countries. The company is growing by 7% per annum. Mubarak Abdullah Al Khater, Executive Director New Business Development, Saudi Electric, highlighted the pace of new business development that the company is undergoing. "The new business development solution space is large. We established a new business development programme about a year ago as part of our transformation programme and are exploring a number of areas for further growth."

Growth and partnerships

The company is looking at four principal areas for new products and new services to existing and new customers – expansion internationally, stepping out from conventional power generation, backward integration and developing the home of the future and other downstream services such as electric vehicles. "At the moment we are exporting power to the GCC area," Al Khater told the roundtable. "We have a project to export to Egypt but are also looking to find a route to Europe. We are also looking at backward integration in services and considering several JVs in that space, and we have a very ambitious programme in renewable power generation.

"We are also looking at diversifying into smart technology, smart homes and smart cities and a number of other energy initiatives, such as in energy efficiency, energy supply management and demand response as well as other energy infrastructure projects," said Al Khater. "For most of this business, we are seeking to form alliances with internationally experienced partners who can share the risk, transfer the knowledge, open new markets and help us with the funding of some of these projects. We see such partnerships as a good way to foster innovation and new business development."

Continuing modernisation

Gopal K. Saxena, Director, Reliance Energy, BSES Rajdhani & Yamuna Power, briefed participants on the transformation of the power sector in India: "In the past, virtually the entire generation space was taken up by government-owned entities. Now, private players account for 38-40% of generation capacity in India. The generation capacity in India today is about 280GW and the way we have been growing we expect to be number three in terms of electricity production by 2017. There are enormous challenges that come about as a result of this growth."

Saxena highlighted the strains in the distribution sector in India: "The challenges faced in the distribution sector are immense. There are more than 73 distribution companies. 57% are state-owned and cover about 95% of the country's area. They are characterised by high losses and costs, high tariffs, heavy subsidies, low operational efficiency and network unreliability as well as minimal adherence to standards performance and supply codes."

In contrast, BSES is recognised as having overcome many of the problems that continue to dog Indian power companies. It has had a long transformation journey since privatisation in 2002, reducing losses dramatically by over 40% post-privatisation. Smart meters are installed with its 3.75 million consumers and it has introduced state-of-the-art SCADA systems in its network. Saxena added: "But, of course, we are continually looking at more and more innovative ways to improve, for example by focusing on our system reliability and by integrating energy audit and consumer feedback to the consumer through advanced metering and advanced metering infrastructure."

Off-grid innovation

In India and other parts of the world, access to electricity remains out of reach for many people, particularly in sub-Saharan Africa. Nearly one in five of the world's population don't have access to electricity. On current trends, two-thirds of them will remain without electricity by 2030, which is the target year to achieve the newly agreed post-2015 UN Sustainable Development Goal of universal access to energy.[4]

But a new report from PwC points out that "the old assumption that they will have to wait for grid extensions is being turned on its head by new technological possibilities. 'Entry level technology' and service bundles have come into the world of rural electricity, in a way not dissimilar to other areas of technology such as mobile devices or computing. Mobile payment infrastructure, customer-driven affordable payment systems and new entrant business models are all playing a part in a new bottom-up energy access that can complement the traditional top-down planning of national grid extensions."[5]

Mobisol is a German company that is among those at the forefront of the fast-growing market for this type of off-grid solution. It has a growing customer base in Kenya, Rwanda and Tanzania, having developed a small-scale solar home system that can provide a reliable source of power for households that have little prospect of being served by the grid. The systems come in different sizes with the smallest able to illuminate a medium-sized home with seven LED bulbs as well as power a radio, charge various mobile phones and run a TV for some hours during the day.

Thomas Duveau, Head of Business Development at Mobisol, characterised the growth of off-grid systems as a "paradigm change that amounts to an infrastructure leapfrog. There are very rational economic reasons why a growing part of the solution to rural electrification will come from off-grid systems. It also doesn't make any sense to roll out fixed infrastructure when you have mobile phones. Mobile phone penetration in Rwanda is higher than in the north of Berlin. In Tanzania, one percent have a bank account but 70% use mobile payment for their normal transactions."

As well as providing electricity, the systems often bring a direct economic benefit to their customers as well. Many use their systems to run a small business or to simply sell or pass on their excess energy to their community. Duveau pointed out that: "40% use their system for business solutions, with each solar-powered business creating an estimated additional income of US$35. It adds up to around US$6m additional income created by existing customers each year. For us, the energy revolution in Africa is definitely going to be off-grid and solar."

The growth of off-grid systems is a paradigm change that is leapfrogging fixed-grid infrastructure.

4 IEA, World Energy Outlook, 2015.

5 PwC, Electricity beyond the grid: accelerating access to sustainable power for all, 2016.

Q&A

Q: You have a lot of growth in your market in the Middle East. Do you look across at the disruption in part of Europe and what companies are having to do there and say this might actually happen to us at some point? Or is this not on the agenda at all?

Mubarak Abdullah Al Khater, Executive Director New Business Development, Saudi Electric: It's definitely on the agenda. I am in the new business development part of the company but there is another leadership team that is implementing a big transformation programme and, in addition, looking at possibilities such as breaking out the companies, introducing shareholders, spinning off some of our generation assets. These are all discussions that are taking place at the moment. Electricity is very subsidised in Saudi Arabia, so even though our company looks profitable on a standalone basis, the government does fund the growth that we have. So we are looking at these things. It is part of the new PPP model that Saudi Arabia is introducing in all sectors and utilities is one of the most important, heavily-funded infrastructure areas that needs to go through this transformation.

Q: 'Empowering customers, shaping markets' is a phrase used by E.ON to encapsulate their transformation journey. How would you describe the market of the future, because what you and the sector in general are moving into feels like a lot more than just selling electricity?

Thomas Duveau, Head of Business Development, Mobisol: In the beginning, we thought of ourselves as a distributed energy services company, seeing KW hours and appliances as our core business. The first customer who finished paying the system off came back to us and said can you bring me insurance? So we now have a completely new business model where we bring wider services to them. For example, we've asked farmers 'what do you need?' As well as a 600W system that comes with devices such as solar water pumps and machines for milling, drying and cooling, it also has micro-insurance specifically for the agricultural sector, a micro-loan to buy seeds and fertiliser and a small tablet which gives you market data, price data and weather data plus a couple of educational videos on efficient agriculture. That's providing for all the needs of a small-scale farmer who typically today is very vulnerable to climate change and market price variation. So, we're setting up an infrastructure 2.0 where there is no infrastructure serving clients, providing an entry point for a whole set of customer needs.

Gopal K. Saxena, Director, Reliance Energy, BSES Rajdhani & Yamuna Power: Ten or fifteen years back when we took over the distribution utility, its consumers were accustomed to four, five or maybe six hours of outages. Today, if there is lack of electricity for even five minutes, I start getting calls saying 'hey, I don't have electricity'. Today, billing problems are not there at all. And consumers, particularly in Delhi, have come to expect a whole range of services which were unheard of ten years back. Five or ten years from now, they are going to be asking many more questions on how they can get into energy efficiency, reduce their bills, have demand-side management, things that today are just getting off the ground.

Energy transformation and the implications for financing

Energy transformation is introducing volatility into the economics of energy which, in turn, affects investment. The penetration of renewables is having a considerable effect on market pricing. And the increasing significance of distributed generation has growing implications for centralised assets. Long-term payback horizons are becoming much more uncertain. When PwC teamed up with other partners to quiz 80 recognised international experts from the energy sector and related industries around the world, we found most expected the unit price of electricity to have become of secondary importance by 2040 in view of the low marginal costs of renewable energy generation.[6]

"Regulatory regimes are changing in line with the new energy world and there are inevitable uncertainties not only about the future energy mix but also the role of certain assets in the energy system," said Jeroen van Hoof, PwC Global Power & Utilities Assurance Leader, as he introduced the roundtable session on investment finance. "All this adds to uncertainty and, of course, investors do not like uncertainty. But, at the same time, the investment requirements of the sector are considerable."

Looking for the 'new boring'

Nonetheless, many parts of the sector are very attractive to investors and the interest in regulated assets with long-term, relatively predictable returns is intense. A number of participants stressed that the appetite for the right kind of investments remained strong, characterising them as the 'new boring' given a low interest rate investment climate where government bonds are giving minimal returns. Many investors are interested in these 'new boring' investments with stable cash flows and low volatility.

Among the challenges for investment vehicles is managing the operational risk. This opens up partnership opportunities with utility companies and, indeed, there are increasing examples of such partnerships. One financial company participant observed: "If you consider that Canadian pension funds in some cases have around 15% invested in infrastructure and German insurance companies have just 1% then you can see the huge potential."

6 Delphi Energy Future 2040, German Association of Energy and Water Industries (BDEW), Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH, PricewaterhouseCoopers AG WPG (PwC), 2016.

The sector has a heavy investment need in front of it so we have to think about how we approach partnerships with investors.

A focus on yield

Chris Manser, Head of Infrastructure Investments, Swiss Life Asset Management, took up the infrastructure investment theme, pointing out that the capital charges established by the European Commission under its capital adequacy regime are particularly favourable for infrastructure investment and are helping drive demand for assets in Europe. But he also stressed that they are accompanied by relatively restrictive conditions: "The key is that revenues have to be stable and visible. Regulated utilities and other regulated businesses would generally meet the conditions but it is unclear that you would be able to apply this favourable capital charge to businesses with more variable revenue models."

As well as a stable income from an infrastructure portfolio, Manser pointed to the importance of limited cyclicality and downside risks plus the need for high cash yields: "We don't want to wait years to get our returns, we want to make them during our holding period. Given the yield focus, we are also more focused on operating assets. We have some capacity to invest in greenfield assets but the overall goal is to have a yielding portfolio and not have to wait. Riskier business models would generally be falling into the private equity bracket which, in turn, would require higher returns depending on the exact risk profile of the opportunity. Of course, the other key aspect is that when you look at the lifecycle of an investment, it often goes through a phase of derisking, starting off with one type of investor and then getting handed over to an investor with a lower risk appetite."

Regulation is key

Mainova AG is one of the largest regional energy suppliers in Germany, supplying electricity, gas, heat and water to customers in Frankfurt and the surrounding area. Christof Sagasser, Mainova's Director of Corporate Strategy, Mergers & Acquisitions and Investment Management, observed: "The sector has a heavy investment need in front of it and not all utilities will be able to finance it from their balance sheets so we have to think about how we approach partnerships with investors."

Sagasser stressed the importance of regulation: "When it comes to regulated assets, regulation is the key risk. What regulators have to understand is that stability in the key regulatory parameters is very important. In some areas, regulation is not bad. But I think there is a need to improve and to explain it much more to investors. The big question is obviously what is going to happen to remuneration payments and making sure they are attractive for investments going forward."

Q&A

Q: A lot of assets in the 'new energy world' require some form of government support. Will they be able to reach a point where they can attract investment without such support?

Chris Manser, Head of Infrastructure Investments, Swiss Life Asset Management: Inherently, as investors we do not like merchant power risk. If we were to look at projects without any feed-in tariff or support from some form of certificate regime, we would need the bulk of our revenues to be hedged through long-term power purchase agreements. That's the view from the equity side but it will be similar if you want to finance these projects on an asset-by-asset basis with non-recourse debt. Realistically, we are in the more conservative camp. Other investors may have more appetite for merchant risk but there are also others who would have even less appetite.

Q: We are seeing growing momentum from some investors to disinvest from coal and that is beginning to spill over into doubts about other fossil fuels. Do you see some assets becoming un-investable?

Manser: We see an increasing importance of ESG principles in general and the environmental part of it in particular. There is a growing tendency in the institutional investor world to avoid nuclear, coal and other fossil-fuels. On the other hand, if you look at gas, that is the reality and it will continue to be the reality for the foreseeable future. I do not expect to see any shying-away of investors from the gas sector.

Q: Does this sector as a whole become less attractive to you as investors, given the disruption that is going on?

Manser: I think you have to understand things from a relative perspective. Clearly returns for us have dropped. Achievable returns that five years ago might have been in double-digit territory might now be three or four points lower but, at the same time, government bond yields have dropped and our liability benchmark has not moved as significantly. Hence, on a relative basis the returns from infrastructure are still attractive.

Q: How do you react to the new energy world issues that have led companies like E.ON to embark on radical structural change?

Christof Sagasser, Mainova's Director of Corporate Strategy, Mergers & Acquisitions and Investment Management: All utilities have the same challenge. We as a publicly-owned company cannot follow the E.ON split route but we have to create different points of focus within our own company so that, on the one hand, we have areas that are standardised and traditional and we also have to develop the new digital world alongside that. On the investment side, there will be more partnerships and the future will be about the combination of the competences that the partners have.

Customer transformation: how to play and how to win?

"In my view this is the best time to be in the industry since Thomas Edison. There's going to be more change in the next ten years than there has been in the last 50," said Strategy&'s SVP Tom Flaherty, opening the roundtable's final session, which focused on customer transformation. "But the problem with this industry is that it tends to innovate very slowly and, in a new era where customer behaviour is changing and new entrants are coming in, that innovation pace is too slow. Customers are looking for a combination of five things - choice, comfort, convenience, collaboration and control - and are beginning to be much more willing to experiment. So the time between their first awareness and their adoption is shrinking very quickly."

Overcoming the legacy of the past

In Brazil, AES serves the largest market in Latin America and has been working hard to overcome a legacy of poor customer relations than had regularly placed it among the ten worst distribution companies in consumer protection agency rankings. Its customer relations transformation journey, which included training over 24,000 staff, senior executive involvement in front-line call centre operations and following five golden rules, has seen it reduce complaints by 65% and leave the rankings behind. "The impact of having the president following a call in the call centre is amazing for the morale of the group," reflected Vernaglia.

Based on its new relationship with the customer, AES has recently launched AES Ergos to develop opportunities in new disruptive technologies, energy services, energy efficiency and other 'behind the meter' services. "It is a new business stream that's in a large group but without the size and the bureaucracy of the distribution company," explained Vernaglia. "It includes a completely new team that has come with a new mindset, developing partnerships and working with start-ups." The aim is for this new initiative to gain increasing revenues from non-regulated markets, to close the gap between the limited growth that can come from the company's traditional, regulated and low-margin incumbent businesses and the higher growth expectations of shareholders.

Growth in the new energy space

With more than 4.5 million customers and approximately 44,000 megawatts of generating capacity, Atlanta-based Southern Company is the premier energy company serving the Southeast US through its subsidiaries. It recently celebrated its 100th anniversary and has a lot to be proud of, with a reputation for energy innovation, excellent customer service, high reliability and retail electricity prices that are below the national average.

But, as Chuck Darville, SVP Marketing and Programme Management for Southern Company, commented: "We are now faced with a new way of doing things. The pace of sales growth is behind GDP growth and many see this as a tipping point for a 'new normal'. We have other companies coming to our customers telling them 'we could help you manage your energy better'. And we're seeing distributed generation starting to make inroads into the US. It's a tremendous inflection point and leading us to say 'uh oh, maybe 100 years of the way we've done things that allowed us to be so successful before isn't the same as the things we need to do in the future'. We need to honour our past, but how do we sell more KW hours and non-KW hours in going forward?"

Key strategic moves

Southern has made three recent strategic moves in answer to that question. It is combining with AGL Resources, doubling the number of customers to nine million and creating the second-largest utility company in the US by customer base. It gives it a very strong customer platform on which to market its growing offer in new energy services. And a second recent move is designed to leverage part of that. It has transformed its distributed infrastructure position with the acquisition of PowerSecure. “We didn’t think we could move into this space organically so we bought a company that has a great reputation for being able to go on site and provide distributed infrastructure,” commented Darville.

The third move is internal. Southern has established an Energy Innovation Centre within Darville’s marketing and programme management area to focus on developing strategic partnerships and commercialising products and services that benefit customers. “What we’re trying to do in our innovation centre is be a catalyst to engage the employee population to be innovative, incubate and deliver new products and services,” said Darville. “Most importantly, it aims to be the tip of the spear for how we may do business differently going forward than we have in the past. I can’t wait to see what happens.”

Transforming customer engagement

Taking his cue from Southern’s 100-year history, Ian Peters, Director of Customer Facing Strategy at British Gas, also highlighted his company’s heritage: “The very fact we’ve been going for 204 years says we can anticipate, live through and prosper in any number of transformations.” Now part of Centrica, British Gas has been part of major change in recent years. It led the smart meter rollout in the UK and has invested significantly from 2008 onwards in digital technology, both to lower costs and improve customer service. “By 2015, three quarters of all customer interactions were digital and half of those came off our app on a smart phone. In seven years we have transformed both the cost base and the service proposition. As well as supplying gas, we’re the market leader in electricity. Competition is fierce. If I look back to 2010 in that market, we had five competitors. Now we have 39 competitors.”

Centrica is a market leader in connected home products, using its Hive smart thermostat and other services to help customers manage their energy use in the UK, Ireland and North America. Peters outlined how Hive is transforming customer engagement: “It started out as remote thermostats then included remote lighting controls, alarm systems, and it’s going into assisted living and intelligent boilers. I think it’s the start of something genuinely transformational about the customer relationship. Customers are interacting with these devices twice a day on average, compared to the twice a year when the clocks changed and they would adjust their old thermostats. What it does to consumer metrics is pretty powerful.”

“In essence, we’re moving from being a commodity energy vendor to an energy and home management partner. I often get questioned why we’re helping our customers use less of our biggest product. It’s all to do with the economics of retention in the energy market,” commented Peters. And the connected home initiative is part of a wider strategic change in Centrica: “We’ve been progressively moving out of central generation. We’ve sold all of our wind portfolio and closed down half of our CCGT fleet. We’ve currently kept hold of the nuclear portfolio but we’re net exiting from central generation and net investing significantly in distributed generation.”

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Q&A

Q: What's your view on the technological change and transformation that lies ahead? Is it hype or will it become a reality?

Chuck Darville, SVP - Marketing and Programme Management, Southern Company: I think it's quite obvious that it is reality. It is fundamentally changing the business that we've run the same way for 100 years. It is change not just in how we make, move, sell and deliver a product, but the way we engage our customers.

Ian Peters, Director of Customer Facing Strategy, British Gas: It's definitely here to stay. And the pace of change is accelerating. Customer feedback is now immediate. The data insights that come from connected devices and social media are rapidly accelerating the lifecycle for new developments. The boundaries of the energy sector are becoming more blurred as this technology enables connections to be made. So, I think the future is less clearly about energy and is more uncertain, but also more exciting about where we can go.

Q: Many Chinese companies are active in the power storage market and it is very competitive. How do you view the competitive landscape for storage?

Teresa Vernaglia, SVP, AES Brazil: We are very well positioned at present. Looking ahead, we see a lot of big groups investing in the same technology. I think we are some steps ahead. Our approach is agnostic in terms of who provides the battery – it can be any manufacturer. What differentiates us is our software solution, whereby we can manage the batteries better, which gives advantages for reliability and the lifecycle.

Q: It's one thing to up the game in terms of marketing capability and customer engagement, but it's another thing to actually turn yourself into an innovative organisation. How do you actually build and embed a culture of innovation in your organisations?

Peters: We took the decision to seek most of our leading-edge customer proposition innovation outside of the core enterprise. We hired a group of people on a different set of contracts, put them in a different building and manage them quite loosely. It has a different culture, it plays to different rules and it's monitored in a different way. The parent organisation is the bank so it's not completely unfettered. I know well enough that had we gone the other way and had the same ideas but tried to get the parent company to build it, we wouldn't be where we are today.

Vernaglia: When you are talking about innovation in the group, it is important to distinguish between different types of innovation. For example, we need innovation to improve the existing business model and innovation to generate new business. We have different teams to focus on these two innovation pillars. They are both very important but require different mindsets, different decision-making processes and different tools.

Darville: We've had our new innovation centre for about a year and the thing I'm most excited about is that, as innovation happens around the 26,000 employees at Southern, we are there to celebrate and support it. We've run system-wide competitions where we say give us your ideas and we'll engage with them. The feedback has been enormous. Everybody wants to contribute, everybody wants to be successful and everybody wants to be part of something new and exciting.

Wrap up

David Etheridge, Global Power & Utilities Advisory Leader, PwC US

"We've heard about transformation in a very real and first-hand way. We've seen what is very different today compared to just a few years ago in developed markets such as Germany, the US and the UK. We've heard about the rapid changes taking place in places such as Brazil, India and the Middle East as well as the off-grid transformation taking place in parts of Africa and other parts of the developing world. We were reminded about what's important for investors in this 'new energy world'. And we had the chance to get an insight into the telecoms industry and how 'it's all about the customer, stupid!', to borrow a well-known phrase.

"The discussion brought to life the fact that this is an industry of big assets and big decisions. As an executive you might have a five-year tenure but be taking a decision with 40 years of consequences.

"I heard executives talking about the customer with a level of intimacy that, frankly, I hadn't heard from the industry before. It wasn't the 'rate-payer customer', it wasn't the customer that 'needed to understand the industry'. Instead, it's the industry needing to understand the customer. There's an appreciation that, if you focus on the customer, it will drive innovation. Delivering ways to empower the customer actually makes you even more innovative.

"If you can find those paths to the customer to enable them to do things they couldn't do before, that will drive your company to be different. There needs to be laser focus on mining data - customer data and other data – that will give you a competitive advantage.

"Technology change is real and you need to use it to drive your business. But there are dangers as well. You've got to assimilate new technology in a way that truly changes what you are offering and doesn't just put a glossy front face on something that is broken. You've got to take a very thoughtful approach to embracing all the new technologies.

"Finally, look for avenues to think differently, whether it's using innovation centres, thinking about millennials, working with new people within your company in a different way, or asking different questions of your customers, peers and colleagues."

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