

CEO perspectives

With so many survey respondents putting an emphasis on business model transformation, we decided to show the early results of the survey to leading CEOs from different parts of the power utilities sector around the world. Here we present their perspectives on the changes ahead.

Dr. Johannes Teyssen
Chairman and CEO
E.ON SE



Do you expect the power utility business model to be transformed and how would you characterise future model(s)?

“It is not very likely that the current transformation of the industry will lead to one specific global utility business model. Rather, we will see different options, mainly based on the available choices on the customer side, in combination with IT and energy technology changes. Regarding customers, the future utility business will be characterised by the digitalisation of the customer relationship.

“This means more and faster communication with the customers about their actual demand or, in some cases, also about their auto-generation. Demand-side management will play a more active role and the integration of more PV and wind, i.e. more volatile generation, and of more decentralised generation, will determine future business models. In regions and countries with less of an established energy system, decentralised generation could play an even larger role.”

Will the boundaries of the sector change as business models evolve?

“More players will enter the energy business, hence naturally reducing the footprint of companies already in the sector. Additionally, the use of power will also increase in transport and in heating applications so that stronger competition between fuels will gradually develop. The increasing need for communication, IT, internet and telecommunications, means these types of companies will show increased interest in the energy segment – also driven by their own electricity consumption. IT/Server hosting companies placing their servers in buildings where the waste heat can be used while they save on building cost themselves is an interesting example.

“Last but certainly not least, consumers will become more actively involved in the whole energy system and have a higher footprint in the system as ‘prosumers’. This requires the ability of the incumbent companies to enter into a new dialogue with their customers and increases the pressure to deliver tailor-made solutions.”

What will be the strategic choices that companies will have to face up to?

“The bigger diversity of potential utility business models will influence the number and type of strategic choices. Some utilities will partially become geographically more diverse, in order to find new opportunities and to reduce regulatory risk. Others will re-focus on their traditional home market and search for their niche.

“The focus on customer services and distributed generation will also present options for new business fields. New and more partnerships are likely, either to share financial risk or to profit from different knowledge.”

What’s your reaction to some of the ‘future scenarios’?

“Scenarios are food for thought. One should not rely on them too much, but use them as a tool to think about possible future developments and how a consistent picture of the future could look like. Particularly interesting is the (shale gas) scenario (p13), because it does not follow the route of the often used assumption that mankind is running out of fossil fuels. It is thus an important scenario to find out how robust the renewable energy development will be – and it also puts more competitive pressure on renewables right now.”

On the ‘death of the current energy retailing business model’ scenario (p19): “This is an additional challenge in the future that has the potential to drastically change the whole value chain: generation – because of distributed ways to produce electricity, transmission and distribution – since energy transport would then happen in a much more bi-directional manner, sales – since the products relevant for customers will change. It’s an excellent starting point to find out what kind of modifications will possibly affect the power sector. It is also a good example of disruptive thinking. Since many scenarios

only extrapolate an observed trend in a linear manner these scenarios describe ‘game changers’ and therefore serve as a robust test for our industries current strategy.”

On the energy security scenario (p20): “It’s a famous saying – ‘some things are so unexpected that no one is prepared for them’. No one knows where the breakthroughs will happen and when. But the art is really to find out that a breakthrough is just about to take place. The only fact that is for sure is that our industry cannot rely anymore on an unchanged investment and operational environment in the future.

“Energy security will most likely stay a concern. It might be that in the future, technological development will help to achieve this goal more easily. However, it is also not unlikely that the global energy demand rises in a way that leads to energy security becoming an even bigger concern. Furthermore due to the high importance for energy for any society politics will always pay closer attention to our industry and will focus on security of supply for its society.

“One important issue for a transformation process – and we see this currently in Germany – is affordability. Scenarios mainly concentrate on technological and environmental aspects, a few also on the growing importance of public acceptance of our industry in general and certain technology in special. But between now and the future scenario is always the transformation process – and this means changes, leaving some old ideas behind and heading to something new, that is only vaguely known. And this transformation process costs money – money for new development, for new assets, for inevitable errors and for inevitably stranded investments. These costs have to be borne by someone – and in the end this is usually the end-customer. Keeping the acceptance of the transformation high throughout the whole process requires affordable bills for the end-customers.”

Is regulation facing a crisis?

“In many European countries at least, the energy costs for the customers consist of a regulated and a non-regulated share. In the non-regulated share, competition drove cost-savings and was hence successful in finding the most efficient solution for the customers. However, in some jurisdictions regulators defined an unfair competition between subsidised and privileged renewables and traditional conventional generation. We need a sustainable regulation for linked markets that fosters market-based solutions by simultaneously being open to technological progress.”

Brian A. Dames
Chief Executive
Eskom



Do you expect the power utility business model to be transformed and how would you characterise future model(s)?

“The power and utilities business is where banking and landline telephony were a decade or two ago, with new technologies the main driving force. Technology advancements, especially in distributed generation and energy efficiency, will have a definite impact on existing business models. This, together with a more informed and empowered customer, will shift the business model.

“The timing of these changes will be different across regions. Within the African continent, the transformation of the business model will be influenced by changes in the economic position of the poorer sectors of the population. Should no major improvement in their position occur, government policy is likely to require provision of electricity to them thereby requiring a central dominant utility. This could prevent choice by industry and perpetuate cross subsidies. However, with the rapid advances in technology development and reduction in prices of technologies, utilities could be negatively impacted by reduced demand from the sectors that are currently carrying the cross subsidy.

“Technology and electricity policy reforms will be the major determinants of future models. In South Africa, deregulation could mean a significant increase in the number of IPPs in the sector. Smaller, more efficient plant with shorter lead times could result in decentralisation within the African continent. There could be more partnerships with the customer and more strategic alliances in the sector. ‘Self-reliance’ in reaction to rising prices and unserved areas together with developments in energy efficiency will also have a major impact.”

What will be the strategic choices that companies will have to face up to?

“In South Africa and Africa, you are constantly on a tightrope and balancing act to find a sustainable business model. The three A’s (access, affordability, availability) will continue to drive the strategic choices companies make. The difficulty is trying to find a balance between the three, within the given resource constraints. These aspects influence the next area of choice, namely

technology choice which includes the technology mix and needs to be balanced with environmental impacts and required investment.”

Will the boundaries of the sector change as business models evolve?

“The collaboration between banks, financial institutions and telephony is another facet that could spill over to the utility sector. Partnerships across industry could affect the resource intensive nature of the business, with efficiency improvements and self-generation resulting in reduced demand. Boundaries between sectors and industry are likely to become diluted.

“New players and entrants into the sector could transform and expand the service offerings with a probable merging of related services. Policy will be a major determinant on the choice by these players. However this may all result in an electricity price that is a barrier to the sustainability of the industry.”

What’s your reaction to some of the ‘future scenarios’?

“New energy sources, such as gas from fracking, will be a game changer as will technology ‘behind the meter’. With current advances this is likely to materialise in five to ten years. In developing countries affordability and access to energy, together with other socio-economic challenges, the timeframe will probably move closer to ten years.

“Other important scenarios that could be considered include a scenario of a significant gap between supply options and demand; water becoming increasingly critical in Africa (investment in desalination plants); and regulation becoming location instead of price specific.”

Is regulation facing a crisis?

“There is always a potential to operate more efficiently and reduce costs without compromising significantly on plant reliability. In South Africa, current tariffs are sufficient to cover costs. But fuel costs remain a challenge. The true challenge of regulation is to provide a sufficient return to facilitate new investment and replace plant that is nearing the end of its design life. This is due to the significant cost of new investments relative to the size and wealth of African countries. Regulation will need to evolve as the electricity sector evolves into new products/technologies and the electricity value chain extends ‘beyond the meter’.”

Liu Guoyue
Director and President
Huaneng Power
International, Inc.



Do you expect the power utility business model to be transformed and how would you characterise future model(s)?

“With the deregulation of power market, under the impact of project approval, tariff mechanism and government regulations, the power utility business model will change gradually but a fundamental change is not expected.

“The possible characteristics of future power utility business models include: continuous increase in distributed energy sources; coexistence of mega size centralised power source and distributed energy sources; continuous enhancement in power companies’ information system, integration and globalisation.”

What will be the strategic choices that companies will have to face up to?

“The strategic choice our company is facing up to is to increase investment in clean energy, enhance integration of fuel coal and power generation business, globalisation of operation.”

Will the boundaries of the sector change as business models evolve?

“Our company’s future development in the power sector is to improve the management of thermal power generation, optimise business structures, keep the leading position of domestic power sector development and strengthen cooperation with other sectors. Regarding the boundaries between the power sector and other sectors, our focus is to stick with our core power generation business, and grow into relevant sectors based on this focus. I am not expecting these boundaries will have significant changes. Coal companies and private funds will gradually increase their investments into power sector.”

What’s your reaction to some of the ‘future scenarios’?

On the potential for concerns about energy security to become a thing of the past due to technological changes and new sources of energy (p20): “I agree with this view. I think the main breakthrough will be in wide utilisation of energies such as wind power, solar, shale gas and gas hydrate. And the breakthrough may happen in ten to 20 years.”

On the ‘shale gas’ scenario (p13): “I think the possibility of changing the supply-demand condition is increasing gradually with more types of energy supply emerging.” On the death of the current retailing mode (p19): “I think a new retail model will emerge but the current energy retailing business model will not fade away.”

Is regulation facing a crisis?

“No crisis. There is room for improvement for both regulation and the power sector itself.”

Dr. Omar Kittaneh
Chairman
Minister for Energy
Palestinian Energy
and Natural Resources
Authority



Do you expect the power utility business model to be transformed and how would you characterise future model(s)?

“From my point of view, the market will enforce a change and transformation in the power utility business. But it may be a long time before it becomes unrecognisable transformation. The key to this change will be the penetration of renewable energy and its associated technology, in particular in storage.

“It may change dramatically, but the extent of change depends on the share and penetration of renewable energy and when each consumer will be a producer. This may create a new power utilities model with different infrastructure, investment and regulations.”

What will be the strategic choices that companies will have to face up to?

“The choice (for companies) is ‘to be or not to be’ depending on the evolving renewable technology. But the question of when will need a few more years to be answered.”

Will the boundaries of the sector change as business models evolve?

“New players will come in and mostly they will be the renewable energy producers which will mean that some boundaries and companies may disappear.”

What’s your reaction to some of the ‘future scenarios’?

“I would like to start by commenting on the question whether ‘the number of customers having difficulty affording power will cause governments to intervene more dramatically in the next ten years’. For the next ten years, this might be the case in many of the growing economies around the world, although government intervention is not expected to last for the long run. Technologies will evolve and develop with higher efficiencies getting lower costs, making electricity prices more affordable to people.”

On the nuclear/renewable investments needed to avoid significant global warming will prove too costly for governments to support (p25): “I think this is of low probability taking into consideration the technological advancements occurring in the sector, and the constant improvements taking place in areas such as energy storing technologies which will highly impact the sector on the long run.

“Another point to take into consideration are the regulations that are being imposed around the world to protect the earth’s environment, which would make the current ordinary methods of generating electricity less attractive, simultaneously making renewable energy more attractive and feasible while maintaining the feasibility of the power generation business.”

Is regulation facing a crisis?

“The room for improvement is within the industry and the regulation. The efficiency of the industry and the regulation should cooperate together.”