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Customer Empowerment Strategy and Shaping Markets in the Production of Electricity

SUMMARY

A large number of energy companies in the world today a faced with global transformative trends which devastatingly affect their business results. Therefore, energy companies in the world were very slow in investing and adopting renewable energy sources and become significantly overcapacitated by coal and gas fired power plants which are now unprofitabile due to low marginal costs of renewables and their priority dispatching into a power system. Also increasing the share of renewable energy sources in the structure of electricity generation, the decline in primary energy prices (fossil fuels) the stagnation of consuption and the surplus of supply in relation to electricity demand caused a drop in wholesale electricity prices by half compared to 2008. Furthemore, the operation of coal fired power plants is burdened with carbon dioxide emissions. As a result, there has been a significant reduction in revenues, falling stock values andthe collapse of credit rating of many energy companies in the world. This article analyzes the implementation of the strategy of empowering customers and shaping markets that the E.ON Group has carried out as a „response" to global transformative trends in the energy market environment by which the former company was divided into two less dynamic and more focused companies into a new or conventional energy world. This strengthens the competitiveness of all previous business activities due to stronger focus on the development of necessary skills and process. Furthemore, from on investor perspective it has been shown that the risk profiles associated with conventional energy production differ from those related to the new energy world, ie the activities covered by the business portfolio of the E.ON Group, and the activities covered by the business portfolio of the Uniper Group attract different types of investors.

KEYWORDS

Customer empowerment strategy, Schaping markets, Global transformative trends, Renewable energy sources, Customer solutions

INTRODUCTION

Energy companies from both sides of the Atlantic, face a big question of their own survival in the environment of the new environment and energy policy [5]. Therefore, faced with the dilemma of failure or sucess, the decommissioning or transition to new innovative business models. Utilities are experiencing an unprecedented change in their operating environment, which requires a broad reinvention of business models. Historicaly, a centralized and grid–conected power generation structure positioned utilities in the center of power system, with a culture focused on regulators and mandates rather than innovation and customer service expectations. This utility business model is now profoundly questioned by the accelerated deployment of distributed energy resources and smart grid technologies, as well as profound changes in market economics and regulatory frameworks. This is global trend, to which utilities and regulators around the world seek to find adequate solutions.

GLOBAL TRANSFORMATIONAL TRENDS IN THE ENERGY MARKET

Global trends in power market landscapes show that approaches to business model inovation will be diverse [5]. Utilities operate under different regulated or deregulated market models, varying ownership structures and in a complex value chain of generation, transmission, system operations, distribution and retail sales. Market models differ in their degree of regulation and competition in the value–chain, framed by varying policy and regulatory settings [8]. Ownership structures vary from 192 investor–owned utilities (IOUs) serving over 73% of all US customers, to 2009 publically owned municipal utilities (14% of US customers) and 871 electric cooperatives (13%). Regulated markets dominate most of the Southeast, Northwest, and much of the West (excluding California). Here, verticaly integrated monopoly utilities cover the entire value chain with oversight from a public regulator. New business models in regulated markets require regulatory changes to provide more performance–based incentives for

greater efficiency and innovation.

In 24 US states, such as California, Texas and most states in the Northeast, deregulated markets have opened up generation for competition from independent power producers. 15 of these states and Washington D.C. have also introduced retail choice, which allows residental and/or industrial consumers to choose their supplier. The role of utilities in deregulated markets is focused on owning, maintaining and operating distribution infrastructure, and depending on their business model, on procuring and marketing power for retail sales. Deregulated markets provide more competitive pressure and more flexibility business model innovation.

German energy transition, has forced the electric industry into a pole position for developing new business models, as the market has now a large number of citizens and energy cooperatives that produce electricity [1]. In Germany, the power market is fully deregulated and characteried by a high degree of diversity, with four large integrated utilities and obout 900 regional and local municipal utilities. The energy transition, in conjuction with the Renewable Energy Act that introduced feed–in tariffs in the early 2000's, has forced electric industry into a pole position for developing new business models, as the market has now a large number of citizens and energy cooperatives that produce electricity. The German Energeiewende is transforming the energy system of Europe's most populated and industry–heavy country from traditional coal and nuclear to energy efficiency and renewable energy. Germany is commited to phasing out nuclear by 2022, and targets a minimum share of 50% renewable power by 2030 (80% by 2050), and 50% reduction of primary energy consuption by 2050 (compared to 2008), particulary in building sector. The main drivers for this transition are: 1. Germany's objective to reduce its energy import dependency and its reliance on dirty coal and nuclear, 2. Germany's ambition to fight climate change, 3. Germany's aim to stimulate technology innovation and employment in a green economy. As renewables become increasingly cost–competitive, there is no doubt that the Energiewende is here to stay. The following figure shows the share of energy consuption in Germany.

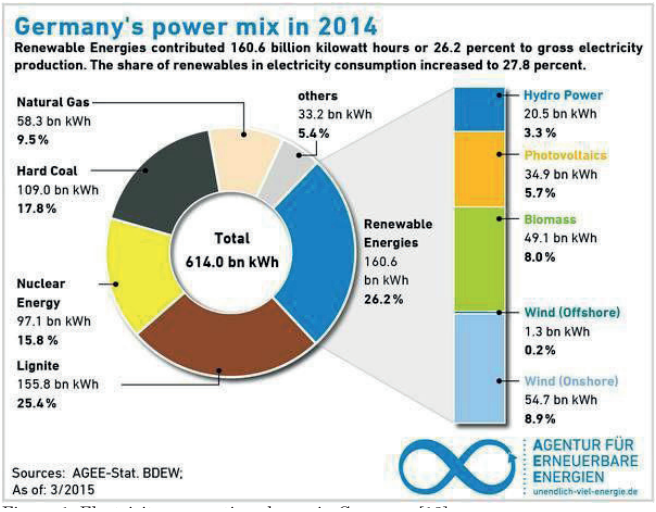


Figure 1. Electricity consuption shares in Germany [13]

The above figure shows that the structure of electricity generation in Germany has significant share of renewables (26.2%), than energy from coal and lignite (43.2%), nuclear energy (15.8%) and energy from natural gas 9.5%. This figure also shows that energy produced from renewables is divided on hydro power (3.3%), photovoltaics (5.7%), biomass (8%), wind onshore (8.9%) and wind offshore (0.2%).

Energiewende affected Germany's three utility groups in a different way [5]. The four large centralized utility conglomerates, the 'Big4' (figure 2) were the worst hit. Having dominated the market for a long time, E.ON, RWE, EnBW and Vattenfall owned and operated about 80% of Germany's generation capacity, predominantly centralized fossil–and fossil–fueled power plants. They reduced the historically prominent role of the local municipal utilities to mere re–distributers of electricity. The generation share of the 'Big4' has however, dropped to 47% since 2011, when the German government decided on a nuclear phase–out by the year 2022 and eight reactors were immedistely taken off the grid. Understimating the improwing economics for renewables and the persistence and dynamics of the Energiewende policies the four large centralized utility conglomerates were very slow in investing in and adopting renewables, and now own only 5% of Germany's installed capacity [4]. Instead, they invested heavily in coal and gas–fired power plants in the mid–2000's. The folowing figure shows generation mix of the German 'Big4' electricity conglomerates.

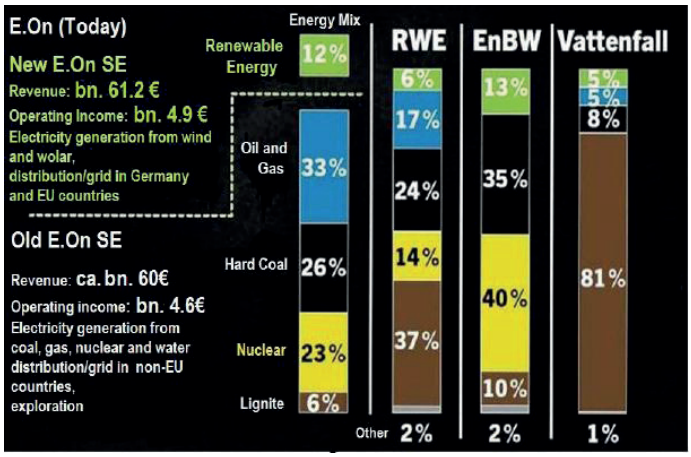


Figure 2. Earnings German „Big 4" electricity conglomerates (2013 mlrd. €) [32]

The above figure shows earnings of German „Big4" electricity conglomerates and shares in their energy production. This has left them with significant overcapacities that are now unprofitable due to the low marginal costs of renewables and their related merit order advantage of lowest cost power sources being dispached first. Renewables have caused whole–sale power prices to drop by half and peak premia by almost four–fifths, erasing the utilities „bread–and–butter" revenue [5][9]. „ What at the time may have look like a prudent business decision to protect investor interests, in hindsight has to be qualified as clear mistake of the „Big4": leaving the „small–sized" business with decentralized renewable energy to others, in particular to citizens and renewable energy cooperatives" [12]. The German generation market is now highly fragmented and localized with over 50% of the supply companies being owned by citizens, rural communities or by regional and local municipal utilities. The same trends is occuring in the retail sales market. With over 900 electricity suppliers, this market is very fragmented and competitive, and retail market share of the „Big4" has been continously decreasing to below 44% in 2013, down over 10% since 2011. As a result „Big4" have lost 70% of their market capitalization since 2008 on average and carry huge liabilities [28].

The following figure shows the lost market capitalization, share price of selected German Utilities.

Figure 3. Share Price of selected German Utilities vs. DAX 2006–2015 ODS [34] (Index May 2006 = 100%)

The above figure shows a significant fall in stock prices German „Big4" electricity conglomerates from 2008 to 2015 year. This crisis has trigered significant reorganization plans and write–offs and an intense search for new business models [5] [4]. Germany's largest utility E.ON announced plans to get rid of its core business of commodity–driven conventional power generation by 2016, which will be part of a new „Uniper" company. E.ON itself will focus entirely on renewables, distribution and smart energy services. E.ON's strategy is by far the most radical one, stripping the company down to a fraction of its former business and completely changing its nature. RWE, Germany second largest utility, has announced considerable layoffs, the closure or sale of generation assets and of other parts of company, as well as a stronger focus on new business fields and costumers. Germany third's largest utility EnBW, which is almost fully publicly owned by the state of Baden–Wuerttemberg, has to shut down 40% of its fleet due to nuclear phase–out and is thinking along the same lines as E.ON, focusing entirely on renewable energy generation, distribution and energy services. For political reasons, the Swedish energy giant Vattenfall is considering selling its coal facilities and eventually exiting the German power market altogether.

Regional utility service companies have adapted well to the Energiewende [5]. These mid–sized regional utilities, such as MVV Energie in the Mannhein region, Mainova in the Frankfurt/Main region and SWM in the Munich

region, cover all competitive functions of the electric value chain either directly or through partners. They represent over 8% of German retail sales, and are either investor–owned (with a considerable share of public shareholders) or fully publically owned. They have focused on meeting their clients' needs and expectations through investments in renewable energies and offer inovative energy services. Many of them inteligently use cogeneration to rely on power and heat for balancing their budget. They use their size, local proximity and emotial ties to their customers to their competitive advantage. They focus on quality of service instead of excesive price competition with discount retailers. Being decentralized in their structure and focus, regional utilities are well positioned to respond to the increasingly distributed power generation and consuption that the Enegiewende asks for.

Local municipal utilities are preparing for vast changes in their business models after a period of significant downturn that resulted from the previously dominant market position of the „Big4" and from increased competition by new discount retailers. While municipal utilities constitute the majority (700) of Germany's 940 local distribution system operators (DSOs) and its over 1100 retail supliers, they are higly dependent on buying power from the „Big4". Many local municipal utilities are struggling with a lack of investment capacity and with adopting new business culture that focuses more on energy services than kWh–sales. Despite these challenges, a „re–municipalization" trend is noticeable in Germany [5] [3]: communities and cities such as Hamburg are buying back expiring local grid operating concession, which they had previously sold to the „Big4" [3]. Since 2005, over 120 local municipal utilities have been founded. In adition to the traditional utility industry, as Fratzscher (2015) states, an increasing number of communities have taken over their own energy supply [5]. In Germany, 146 communities and regions, ranging from 1000 to 1 milion inhabitans, are implementing 100% renewable energy strategies: major cities such as Frankfurt and Hannover, smaller cities like Scwabisch–Hall, or even small-towns like Schonau. Several of them are already fully energy independent in their power and heat supply. The EU undertakes significant efforts to strengthen these so–called „100% renewable energy conmmunities". In the USA also a growing number of communities are engaging in distributed energy generation: 56 villages, cities and counties across the country are considered as „Green Power Communities". Consequently, in USA as in Germany, utilities face a convergence and acceleration of very similar transformative trends related to changing technology, policy and market developments. The following trends will profuondly alter the current power market landscape and require business model innovation on both sides of the Atlantic. Next few years will be a decisively pivotal period for utilities to adapt and reinvent their future rather than being drawn into a „vicious cycle from distruptive trends" or, as others call it the „utility death spiral" [7]. Below are 7 global transformative trends in power market landscape.

Supply will be increasingly decentralized

This future state imply relocation of generation from high voltage to low voltage [6]. Even if market share of renewable generation is still comparatively limited,, small–scale distributed capacity represented about one third of new global investments in clean energy in 2014, approx. US$ 80bn [5] [18]. Overall, renewable energy (excluding large hydro) made 48% of the new power capacity added globally in 2014, the third succesive year in which this figure has been above 40% [22]. This investments are still strongly driven by government mandates and policy incentives, such as feed–in tariffs or quota systems (renewable Portfolio Standards). However, decreasing costs particulary for onshore wind and solar photovoltaics (PV), continue to improve the economics of renewables even without incentives. The following figure shows US Solar Photovoltaic (PV) Installation and Average System price in period from 2000 to 2013.

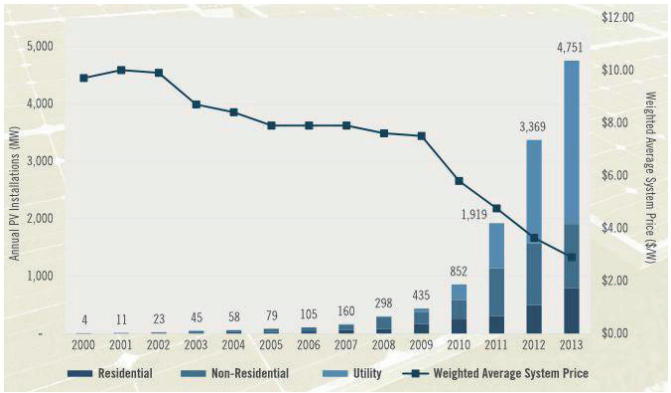


Figure 4: US Solar Photovoltaic (PV) Installation and Average System Price (2000–2013) [24]

As a global trend, the national average price of an installed PV system in the USA decreased by 63% between 2010 and 2014, reducing costs for residential rooftop system to US$ 3.48 per watt [5] [27]. While decentralized large scale wind projects by indenpendent power producers initially led the way in the USA and now account for 65,900 MW, customer–sited distributed generation, particularly rooftop solar, has significantly increased — a trend expected to accelerate as costs for PV decrease further [16]. The US added about 6,201 MW of PV in 2014, totaling 18,300 MW, a 30% increase over 2013 and more than 12 times the amount installed five years earlier [27]. In Germany, thanks to the Energiewende, decentralization is well advanced: in 2014, 157 TWh (of 610 TWh in total) were generated from decentralized renewable sourced, accounting for almost 28% of domestic electricity consumption [17].

On both sides of the Atlantic, many incumbent utilities are still slow in adapting to this trend of competitive renewables and prefer to stick with their accustomed model of centralized and large — scale, fossil and nuclear — fuel generation. For majority of US utilities, renewables still constitute just 0.1–3% of retail sales. Only the utilities that serve sunny or windy states and/or are forced to by ambitious state policy mandates have renewables accounting for 12–21% of their retail sales. In Germany the „Big4" still only own 5% of the renewables capacity.

Increasingly favorable market and regulatory conditions will lead to an acceleration of this trend towards decentralization of electric supply (and demand). This will pressure utilities to profoundly change their centralized way of thinking and doing business. However, it will also increase the financial pressure for these utilities to make significant investments in grid infrastructure and system operations to enable the integration of distributed and variable renewable energy generation.

OECD energy demand will continue stagnating or declining

„Why demand growth is out, energy efficiency is in, and the important implications of the two" one can ask a question [6]. While the economic slowdown has been the main reason for declining electricity demand since 2008, better energy efficiency measures, particularly from stringent building codes and appliance standards, will decrease the importance of kWh sales of utility business drivers [5]. In Germany, electricity demand has declined since 2011, and energy efficiency, expressed as final energy comsuption per unit of real GDP, has increased annually by 1.67% on average since 1990 [15]. The US EIA foresees electricity growth of only 0.9% annually until 2040 [30].

Moreower, distributed and auto–consumed elecricity will decrease the power demand cake even further. Many individual power producers will still need some grid electricity to balance the variability of their renewable energy system or to sell excess power back to the grid. However, complete grid defection, where customers will fully disconnect from the grid, could increase with the growing adoption of customer–sited distributed storage. In Germany, grid defection is on the rise, with more and more retail customers consuming their self–generated power. Today, around 25,000 companies are already self–sufficient and produce roughly 9% of Germany's total energy capacity for their own usage. Continously slow economic growth in OECD countries and the rising but slow adoption of electric vehicles will not reverse the trend of lower power demand in the mid–to long– term.

Decreasing revenues from declining demand, will thus continue to impact utilities on both sides of the Atlantic [5]. With already eroded credit ratings, utilities' cost of capital risks will rise even further. In the US, credit rates decreased from AA on average in the 1980s to BBB today, with threat of slipping to non–investment grade ratings [7]. This level deteriorates utilities' financial metrics and reduces their access to low–cost capital to enhance the energy system.

The distribution grid will become a smart, interconnected and interactive platform

This future imply that grid management complexity increases in the contest data needs, physics, unpredictability and also that grid increasingly become a back up machine [6]. In adition, smart meters and smart grid technologies, which provide digital processing and communications to the power grid, fundamentally change the dynamics of the lower–voltage distribution systems (below 60 kV) by alloving a two–way flow on information and power [5]. The power grid used to be a unidirectional system where only the utility delivered electrons to the consumer. Increasingly, the increase of distributed energy supply and demand from renewables, demand response, batteries and electric vehicles will make the grid an integrated

and multi–directional platform that interconnects a variety of devices, consumers and producers. This platform will be the basis for a new way of thinking about the power sector. 43% of the US households are already equipped with smart meters [1]. The following figure represents smart meter deployments, planned deployments and proposals by investor–owned utilities, large public power utilities and some cooperatives in USA.

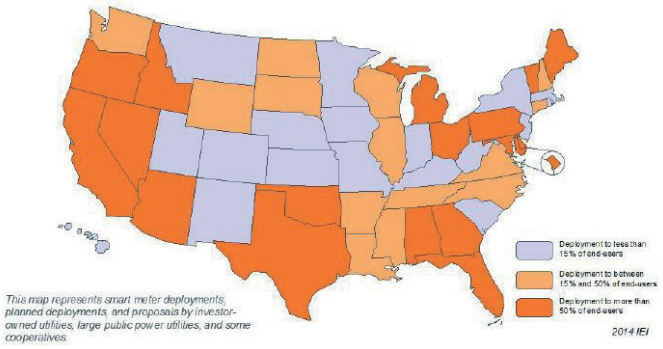


Figure 5: Smart meter deployments in USA (2014) [26]

The above figure shows that more than 50% households in California, Texas, Florida and NewYork have smart meter deployments. Moreover, in Germany, smart meters are still less deployed [5] Discussions are ongoing about how to set the institutionaland regulatory framework to develop the distribution grid into a smart, interconnected and interactive platform [23]. Data collection and analytics, smart and interconnected devices, and time–of–use price signals will allow advanced energy management and smarter energy use „reducing utilities" even further. For utilities this means that, in addition to lower sales, they will be confronted with rising costs to implement these new technologies. Given utilities' deteriorating financial metrics, these investments will become more risky and difficult to realize.

Customers will become active power agents

Customers will increasingly become active power agents–consuming, generating and balancing power — and will have to be situated at the heart of utility operations, in other words, customer become part of supply curve [6]. Technology changes, particularly in the rooftop PV sector, as well as regulatory modifications will revolutionize their role from passive kWh consumers to customers of diversifed energy products and services, and eventually even to proactive „prosumers" who produce, consume and trade power at the same time. Thanks to the favorable feed–in tariff policy and priority access to the grid for renewables, Germany already has a large number of such active prosumers: individuals and farmers own 46% of its 72,900 MW renewable energy capacity, commerce and industry own 14% [14] [5]. In the USA, the PV uptake has been considerable with a total installed capacity of 18,300 MW and another 8,500 MW expected in 2015, of which most rapid growth is anticipated in the residental market. Moreover, generational mentality changes will create new customer expectations: the „millennials generation" born after 1982 and one third of the adult population in 2020 wants products and services that meet the criteria of the three „C"s: cheap, convenient and cool [2]. Utilities will hence need to even actively engage customers on an individualized basis with an emphasis on personalized and tailored marketing, communication, and product and service packages. To do so, they will need to change their mindset from selling one commodity to captive customers towards offering more service orientation. Partnership particularly with innovative data analytics providers will help better explore customer expectations and design customer–centric services. The approach to tailored service packages in the wireless communication industry can serve as an example.

Innovative market entrants will increase competition in the power sector

In the USA as in Germany, innovative and agile providers of energy services up to and behind the meter will continue expanding their market position, service–oriented offerings will proliferate [19]. Up to the meter, for example, third party developers offer leasing services for residential PV or storage systems. Behind the meter, many energy service providers help commercial customers to save energy or to make money from reducing their demand during peak times. These new market entrants will explore and even further expand customer needs and fill the gap with new services. This will accelerate grid defection and endanger utilities than hold on to operating under the old business model of exclusively centralized generation.

The regulated utility business of providing basic power to customers will be relatively shielded from competitors. The electric marketplace will remain regulated to ensure that utility customers and service providers are protected from the lack of competition where utilities are granted exclusive service teritories and monopolistic structures persist, such as for transmission. Utilities will nevertheless want to convince regulators to tap more into the market–based business of providing new energy services up to and behind the meter, and benefit from growth opportunities. This service market, however, is very competitive. Utilities, which as per their original monopolistic model are not used to face competition, may avoid the risk of being outcompeted by etablishing innovative partnership with agile competitors.

System optimization will require significant investments and regulatory changes

System optimization takes two dimensions: market design to remunerate power flows and flexibilization services, and tehnical optimization of grid infrastructure and system operations to manage and balance the power system. These two dimensions of system optimization keep industry, regulators and policy makers busy on both sides of Atlantic [5]. Firstly, revenue generation and long–term investment decisions will be profoundly influenced by the future market design if utilities are to be paid for just providing electrons in energy–only markets or if they are also to be remunerated in capacity and ancillary services markets for reserving generation capacity in case it is needed to balance demand and supply. Secondly, and as the other side of the same coin, tehnical optimization of system operations and infrastructure will continue to require significant regulatory adjustments and substantial regional planning for more flexible grid management and the integration of distributed energy resources. Huge investments are needed to upgrade or replace aging or overhauled generation, transmission and distribuition infrastructure. In the USA for example, investor–owned utilities are expected to invest $100 billion in annual capital expenditures over the next few years, with more being spent on the distribution system and less on generation [1]. These investments pose tremendous stress on financially strapped utilities. Beyond low interest rates, the solution will require innovative financing and regulatory models to allow utilities to realize these investments.

Germany is facing considerable challenges to optimize its system and to ensure the required investments in grid infrastructure. Heated debates on the appropriate market design and on transmission expansions are ongoing on the federal and state level as well as in industry and civil society [35].

Energy policy and environmental regulation push towards cleaner power generation

34% of carbon emissions in the USA and 33% in Germany are attributed to the power sector [5]. As the evidence of climate change and the need for greater resiliency against its impacts become a publically supported reality, energy policy is seen as the key instrument to tackle climate change and to address geopolitical considerations.

In the USA, the proposed Clean Power Plan gives states flexibility to choose their measures for achieving pre–defined emission reduction targets. Moreover, state mandates and policies as well as market–driven carbon reduction mechanisms, such as the regional Greenhouse Gas Initiative (RGGI) for power generators and California's cap–and–trade system, will keep on encouraging a shift in generation mix. Despite its world largest coal reserves, the USA gears towards replacing significant parts of its coal fleet with lower–carbon gas–fired generation, which benefits from more operational flexibility and presently low fuel prices, as well as with renewables.

Just as in Germany, ambitious government targets on the German and EU level call for cleaner power generation. In addition, the European Emission trading Scheme (EU ETS) pushes energy generators to reduce their emissions. For utilities on both sides of Atlantic, investing early in low–carbon generation capacity helps avoid compliance costs to meet increasingly stringent environmental and energy policy and regulation.

Business Model Innovation will be Lifeline for Survival in a Reinvented Clean Energy Future, against the backdrop of the convergence of these multiple distruptive trends, utility executives on both sides of the Atlantic want to adapt; yet it is still largely unclear how [5] [31]. Examples in the USA and Germany show that sound business can be derived from pursuing new business models that embrace two key features: a more distributed and integrative approach to generation and/or distribution, and greater customer and services orientation when it comes to retail sales. This analysis focuses on deregulated power markets so as to alolw for a better comparison between Germany and the USA.

A more distributed and integrative approach to generation can play out on two levels: either as decentralized utility–scale generation (large grid–connected wind or solar farms, or flexible and fast–ramping gas–fired plants) or as distributed customer–sited generation (rooftop PV, small off–grid wind turbines, on–farm biogas digesters, etc.). Government mandates and policies as well as falling technology costs for renewables and low natural gas prices in the USA favor the deployment of both decentralized and distributed generation over large–scale centralized power generation from coal or nuclear.

CUSTOMER EMPOWERMENT STRATEGY AND SHAPING MARKETS IN THE PRODUCTION OF ELECTRICITY (EXAMPLE OF E.ON)

As its states in first chapter, energy companies invested heavily in coal and gas–fired power plants in the mid–2000's, and this has left them with significant overcapacities that are now unprofitable due to low margin costs of renewables and their related merit order advantages of lower cost power sources beingdispatched first. At the other words this companies were operating with losses, and as a result German the „Big4" have a lost 70% of their market capitalization since 2008 on average and carry huge liabilities. This crisis has trigered significant reorganization plans and write–offs and an intense search for new business models. This article analyses E.ON Group's response to global transformative trends in energy market enwironment. Consequently, E.ON Group is divided into two very focused and dinamic companies, one of which is focused into a New world of energy and other into a conventional world of energy. In other words, using Diferentiation strategy E.ON Group develops new business model innovation in generation power, shapes expectations of customers and design energy market

Strategy for future, new trends, new opportunities

This strategy has represented by the E.ON SE on the Press Conference in Decembar 1, 2014 [10]. New strategy of E.ON Group, will involwe dividing broad portfolio of business into two very focused, publicly listed companies. This will better position both companies with strategic opportunities: to grow, to secure jobs, and to create value. E.ON will focus entirely on renewables, distribution networks, and customer solutions and thus on the building blocks of the new energy world. This is the logical consequence of E.ON's commitment to be for their customer's partner of choice and to be best in class in terms of customer satisfaction in all markets. The following table shows split of E.ON into two focused publicly listed companies.

Table 1. E.ON to split into two publicly listed companies [10]

E.ON	
E.ON	Uniper
Endpowering customers	Shaping markets
New energy world	Conventional energy world

Uniper focus on conventional energy world. Well then, E.ON will spin off their conventional generation, global energy trading, and exploration and production businesses into a new, independent company, which will play a key role in ensuring supply security for the transformation of energy systems and in reshaping conventional energy markets. The spin off will involve transferring a majority of the New Company's capital stock to E.ON's shareholders. In addition, they intend to sell the shares of the remaining minority stake gradually over medium term. In conjuction with the new setup, E.ON has sold his entire business in Spain and Portugal to Macquarie, an Australin investment firm, for an enterprise value of €2.5 billion. In addition, board of management is evaluating the sale of E.ON's activites in Italy and will conduct a strategic review of it's exploration and production business in the North Sea. Thanks to their clear setup and missions, both E.ON and the New Company Uniper, will be superbly positioned to play a leading role in their respective businesses and markets and both will be solidly financed, will secure jobs, and will have prospects for creating new jobs in the future [10]. In addition, Board of Management setting up his company that significantly different, because European and global energy markets have undergone a dramatic transformation, as a glance at the changes in the energy value chain indicates.

„Until not too long ago, the structure of energy business was relatively straightforward and linear. The value chain extended from the drill hole, gas field, and power station to transmission lines, the wholesale market, and end–customers. The entire business was understood and managed from the perspective of big production facilities. That is the conventional energy world familiar to all of us. It consist big assets, integrated systems, bulk trading, and large sales volume. Its technologies are mature and proven. This world of energy still exists and will remain indispensable. In the last few years, however, a new world has grown up alongside it, a world characterized above all by tehnological innovation and individualized customer expectations. The increasing tehnological maturity and cost–efficiency and thus the growth of renewables constitute a key driver of this trend. More money is invested in renewables than in any other generation technology. Far from diminishing, this trend will actually increase" [10].

Moreover, the costs of some renewables technologies, such as onshore wind farms, have sunk to parity with, or below, those of conventional generation technologies, and that is expected that other renewables technologies could become economic in the foreseeable future [10]. Renewables aren't just revolutionizing power generation. Together with other technological innovations, they're changing the role of customers, who can already use solar panels to produce a portion of their energy. As energy storage devices become more prevalent, customers will be able to make themselves largely independent of the conventional power and gas supply network. The proportion of customers that want to play a more active role in designing their energy supply is growing steadily. Above all, they want clean, sustainable energy that they can use efficiently and in a way that conserves resources. At the same time, the Internet of Things has arrived in the energy business, creating new opportunities for innovative data–based products and services [10].

The growth of renewables is also changing the role played by distribution networks, which no longer simply transport electricity to customers [10]. At times, the renewables feed–in in E.ON distribution networks in Germany already surpasses their customers' consuption. E.ON's networks are becoming smarter and can also along with transmitting electricity, transmit and process data. Distribution networks, which serve as energy hubs, are integral to the new energy world. This new world, which is emerging around customers and their changing needs, is fundamentally different from the conventional energy supply system which is based on large–scale systems. The decisive success factor in the new energy world is customer proximity. Small distributed equipment such as, solar panels, micro CHP units, and battery storage devices are just as much as part of this world as increasing interconnectivity. This new energy world is still in its infancy, but it will grow faster than the conventional energy world. Both worlds will remain viable for long time to come but they need each other[10]. That's why, despite their fundamental differences, both have their own development and growth opportunities. These are precisely the opportunities bord of management intend to size. Today's E.ON has a broad portfolio of operations and businesses that straddles both energy worlds. It's seen for some time now that E.ON's businesses are characterized by different value drivers, opportunities, capabilities are charaterized by different value drivers, opportunities capabilities, and ways of thinking. The differences between operating big power stations and developnig innovative customer solutions are obvious. E.ON's Board of Management has now come to conclusion that it will become increasingly difficult for a company with a broad portfolio to be successful and grow in both the new and conventional energy world [10]. The main objective in the conventional energy world is to make a meaningful contribution to supply security. Big, efficient assets at favorable locations and with a low cost base represent the key success factors. The new company Uniper will have them, along with outstanding capabilities in engineering and in global energy trading. The new energy world, by contrast, is characterized by speed, agility, innovation, and digitalization. E.ON's Board of Management is convinced that energy companies will have to focus on one of the two energy worlds if they want to be successful in the future. That's why E.ON's Board of Management is going to divide their current businesses into two companies, each of which has the right setup and the right strategy for its particular world. The following table shows dividing E.ON's current business portfolio into two companies. E.ON Group for new energy world and Uniper for conventional energy world.

Table 2. Dividing current business portfolio to E.ON and Uniper [10]

E.ON	Uniper
Renewables	Upstream
Distribution	Global Commodities
Customer solution	Power Generation

The above figure shows that E.ON will focus on renewables distribution networks, and customer solutions. Uniper's focus is Upstream, Global Commodities and Power Generation. E.ON will consist primarily from their regional units' distribution and sales businesses in eight european markets, E.ON Climate & Renewables' wind and solar activities, E.ON Connesting Energies' distributed–generation and energy–efficiency business, E.ON's steak in Enerjisa, their joint venture in Turkey. About 40,000 of E.ON's 60,000 employees currently work in these businesses. With rou-

ghly 33 milion sales customers and 26 million network customers in Europe and Turkey, the future E.ON will have a superb platform for establishing and expanding new end–customers business. With a total system lenght of more than 1 million kilometers, E.ON is already one of Europe's largest operators of electricity networks and in many regions is an innovation leader. With about 4.5 GW of renewables capacity (primarily wind capacity in the United States and Euroipe), E.ON ranks among the biggest and most experienced players in the global renewables business.

The future of E.ON's three core business–renewables, energy networks, and customer solutions–fit together and reinforce each other, creating a business portfolio with stable earnings and strong growth potential. Building on this portfolio, by 2020 board of management intend to make E.ON the leading provider of customer oriented energy solutions, which will enable us to meet customers' increasing demand for greater autonomy and a more active role in the energy world. E.ON's Board of Management intend to make innovative approaches to developing each of the three core businesses. For this purpose, they'll increase investment budget for 2015 by about €500 million in addition to the already planned €4.3 billion. They'll further expand wind business in Europe and in other selected target markets and strengthen solar business. They'll upgrade energy distribution networks in Europe and also in Turkey and make them smarter so that customers can take adventage of new products and services in areas like energy efficiency and distributed generation.

New company Uniper will focus on conventional power generation, global energy trading, and exploration and production. It will consist of E.ON Generation's thermal and hydro fleet, E.ON Global Commodities' trading business, E.ON Exploration and production, E.ON Russia's power generation business, and their stakes in Yushno Russkoye gas field in Russia, in the Nord Stream pipeline, and in Eneva in Brazil. The new company will have its headquarters in Germany's Rhine–Ruhr region. Tomorrow's energy world will continue to need a stable, secure energy supply and access to global markets for energy products. Uniper's core businesses are geared precisely toward meeting these fundamental needs. A strong natural gas portfolio–which encompasses the exploration and production business, gas transport pipelines to Europe, long–term gas procurement contracts, and substantial storage capacity in Germany–will make the Uniper one of the biggest players in the natural gas business. With more than 50 GW of installed capacity, Uniper will be a leading power producer in Europe and Russia. Now, Uniper is Europe's fourth–largest power producer and its largest operator of technologically advanced gas–fired power plants. In recent years Bord of Management has systematically optimized E.ON's generation fleet and dramatically reduced his production costs. From an operational standpoint, they has therefore laid the fundation for sustainable profitability, particularly if policymakers create the necessary regulatory framework for supply security. E.ON's power and gas operations will continue to rely on his trading unit as their interface with global commodity markets and European trading platforms. Trading unit transforms E.ON's power production and gas portfolio into trading products that is markets to customers across Europe and increasingly, around the world. It has trading officies in Asia and North America, ensuring its access to growth markets outside Europe. And it has one of the largest gas–storage portfolios in Europe. Policymaker's efforts to reduce the import risks of Europe's gas supply give gas storage facilities a substantial strategic significance. Uniper's strong positions in the power and gas business will enable it to play a key role in ensuring supply security in the United Kingdom, Germany, Sweden, Russia, and many other countries. The fundamental transformation of Europe's power generation market creates opportunities to reshape this market. Being one of Europe's largest power producer will position the Uniper well to serve as a catalyst and platform for the consolidation of Europe's generation market. Its recognized capabilities will make it a sought–after partner in global energy trading and as a service provider for third parties. Now and in the short term, the conventional energy business faces significant challenges. But Uniper is superbly positioned to seize future opportunities. Many European countries are developing a new market design that will better reflect the growing significance of renewables and the altered role of conventional generation. It isn't a question of whether but rather when they will adopt a new market design, because the current situation is simply untenable. A market design that pays appropriate compesation for generating capacity that ensures supply security will create opportunities for Uniper. In addition, European countries continue to support the EU Emissions Trading Scheme and have already taken tangible steps to revitalize it. A recovery of carbon prices would substantially improve the prospects for Uniper's technologically advanced gas–fired power plants. Finally emerging countries will continue to have a significant demand for conventional energy. Over the medium term, this will create opportunities in markets outside Europe for strong power–generation and trading companies. The business portfolio of E.ON in its new setup and the business portfolio of the Uniper differ considerably in terms of growth, risk, and cash–flow profile [11]. And that each company will face different strategic challenges and will therefore have different requirements for capital. The new setup will create two attractive stocks, each of which will appeal to different investor groups. The future E.ON will offer its investors a balanced risk profile with clear growth opportunities and a large proportion of regulated and quasi–regulated business with relatively stable earnings.

„All of our current capital–market liabilities will remain with E.ON, giving E.ON SE's lenders a strong counterparty that willcountinue to have an investment–grade rating. If E.ON's rating changes in conjuction eith the new. It will be set up with a strong net financial position, ensuring that it too can obtain a solid investmnent–grade rating. Existing provisions for the dismantling and disposal of nuclear and conventional assets will be fully covered in the Uniper's balance sheet. Because it won't have any capital–market liabilities and thanks to its solid financing, publically listed company Uniper, will be financially robust. Board of Management is convinced that the new setup will offer our current shareholders additional value potential" [11].

In view of these strategic developments, the company's restructuring, and the related foreseeable uncertainties, the Supervisory Board agreed to the E.ON Board of Management's proposal that the company should aim to pay a fixed dividend of €0.50 per share for both the 2014 and 2015 financial years. The dividend proposal applies regardless of issues such as the possible consequences of portfolio streamlining, and accounting treatment of the new setup, and the outcome of the pending court cases regarding Germany's nuclear–fuel–tax. As part of the process of preparing the annual finacial statements and the new medium term–plan, the E.ON Board of Managemnent recently tested the the Group's assets for impairment. E.ON expects to record additional impairment charges of about €4.4 billion in 2014, primarily on its operations in Southern Europe and on generation assets. Althought not cash–effective, the total impairment charges will result in E.ON reporting a substantial negative net income for the 2014 financial year. Board of Management expect EBITDA to be between €8 and 8.6 billion and underlying net income to be between €1.5 and €1.9 billion. Because Uniper's business do not yet constitute a corporation, this year and next year they lay legal foundation for them to be combined. This will involve bringing together under a new parent company those business units that will belong to the Uniper. They will then spin off the Uniper by transferring a majority of its capital stock to E.ON's shareholders. Moreover, they intend to sell the shares of remaining minority stake on–market over the medium term, enhancing E.ON's financial felxibility for future growth investments. New strategy gives their employees good prospects for the future in two superbly positioned and attractive companies [10]. It also offers E.ON's stockholders attractive investment opportunities in two companies with sharper profiles, a high degree of earnings transparency, and improwed earning prospects. E.ON wil offer their customers the innovative holistic energy solutions they expect. That is what the future E.ON will stand for. And Uniper will play key role in ensuring a reliable energy supply.

–*„The two companies' business operations will make a significant contribution to the communities and countries where they operate. E.ON will propel the transformation toward a clean, sustainable energy supply, and Uniper will hepl provide the backup for this process and play an active role in the consolidation and restructuring of conventional energy world. All these elements are encompassed by the name for new strategy: Empowering customers. Shaping markets [10]."*

Two energy worlds, each with significant opportunities

The formerly integrated world of energy supply is dividing into two different energy worlds, convential and new energy world [10]. Renewables and distributed generation are becoming more prevalent. New energy technologies are spreading fast, and customers increasingly demand innovative solutions. Smart grids are creating a data highway for the energy system, and digitalization is moving rapidly foward. They believe this new energy world will grow rapidly. Alongside this new world, the established energy world continues to exist and transform itself. It's still needed to secure the power and gas supply by providing access to global energy markets. Increasingly, it's needed to serve as a stable backup for intermittent renewable and distributed energy sources. The two worlds call for very different business approaches, require different capabilities and skills, and attract different investors. Each has its own development and growth opportunities. The purpose of strategy is to enable to seize these opportunities.

Why not remain one company for both energy worlds?

In their exposition E.ON's restructuring concept give picturesquely explanation new strategy:

„A generalist is no longer the right player for the energy markets of today and tomorrow. Markets are becoming more fragmented, customer needs more individualized, technological trends more diverse. This more fragmented energy world calls for specialists who are experts in their particular segment. Being able to plan, build and operate large and complex assets has little in common with offering innovative customer solutions. Just as trading commodities and energy products on global markets has little in common with operating smart grids. It's like soccer and team handball: both are about putting a ball in a goal. But not even the top soccer teams in E.ON countries, not Bayern Munich or Chelsa, not Zenit Saint Petersburg or IFK Goteborg would stand a chance against a professional handball team. The rules, skill sets, the formations, the tactics: all are simply too different. And so it is with the two energy worlds. Both are about supplaying customer with energy. But the succes factors specific to each are becoming increasingly different. We're experts in many areas. And we need to demonstrate this expertise even more than in the past. That's why we're combining our capabilities according to whether they fit with the established or the new energy world. This will enable us to deploy these capabilities more effectively so that we can take advantage of growth opportunities. It will also enable us to avoid confusing our customers, enterprise partners, and stakeholders, who may wonder whether we're focusing more on energy efficiency and distributed solutions or on bulk generation trading. We need to seize this opportunities. Otherwise, others will do it first. If E.ON continued to be single company but focused on one of two worlds, their operations in the other world would effectively be demoted to noncore businesses, giving them limited prospects as part our company. Sooner or later, we've have to divest them. That's why the only right course to take is also the name of our transformation project „One2two: best in both worlds." [11]

The One2two project will ensure the creation of two attractive and financially solid companies capable of optimally deploying their people's many strengths and skills. The aim is for booth companies to start from a very good position and to be, as the project motto puts it, the „best in both worlds". Well then, E.ON Group is divided into two very focused and dinamic companies: New E.ON focused into a new world of energy based on business model inovation, empowering customers and Uniper focused into a conventional world of energy, based on security of supply and significant reduction of costs.

Uniper focus: the established energy world

The primary objective in the established energy world is to make an effective contribution to the security of the power and gas supply. The key success factors in this world are to have powerful and efficient assets at good locations, to maintain the highest safety and environmental standards, to have a low cost base, and to have a portfolio of market based gas import contracts and the partnership that go with them [11]. Going forward, they state that Europe will continue to have a substantial need for conventional power generation, a reliable gas supply, and energy trading companies with global reach. Renewables are as fickle as the weather. Fossil fueled power plants provide an important backup service: they ensure grid stability and supply security. This service needs to recieve fair compensation. Althought the details will differ by country, across Europe there there will be new market designs with mechanisms for compensating assets that ensure supply security. Outside Europe, the growing demand for energy can't be met cost–effectively without conventional energy sources. Countries in these regions urgently need companies that can plan and build power plants and operate them efficiently, that can develop gas pipelines, and that can provide a reliable supply of power and gas. These countries want to grow their economies in order to increase prosperity and reduce poverty. For this, they need a stable, diverse, and cost–effective energy supply. Uniper's knowledge and capabilities can play an important role here, not only for their assets, but also for project partners and for third parties. Now, plan is that Uniper will be an established leader for an established world. The established energy world is undergoing continual transformation as well. It calls for state of the art assets that are optimally integrated into the energy system, can help ensure supply security, and have competitive cost position. Uniper's three core business: conventional power generation, global energy trading and exploration and production will enable it to operate successfully in this world.

Generation: Uniper's generation fleet ranks among the most competitive in Europe, giving it a strong position in the ongoing market consolidation. Its power stations, which are located near consuption centres, will have excellent chances in a competitive energy marketplace and in emerging capacity markets. In addition, its technologically advanced gas–fired power plants will benefit from rising carbon prices, which will result from the revitalization of the emissions trading scheme. And its hydroelectric stations deliver stable earnings. Germany's nuclear–fuel tax will expire at the end of 2016 (and possibly earlier, depending on court rulings), which will give Uniper's nuclear power stations in Germany good earnings prospects until the country phases out nuclear power in 2022. It goes without saying that Uniper will meet its responsibilities for the retirement of these assets. Uniper will have almost 10 GWh of generating capacity in Russia and will be a significant foregn investor in that country's energy market. These power plants are located in fast growing regions, where they're needed to meet rising energy demand.

Global trading: Uniper's global trading units connects its power and gas operations with global commodity markets and European trading platforms. It optimizies Uniper's power production and gas portfolio and markets them to customers across Europe and increasingly, worldwide. It has offices in Asia and North America, giving it access to growth markets around the world. It also has one of the largest gas storage portfolios in Europe.

Exploration and production: Uniper's E&P business owns a stake in Yuzhno Russkoye, one of the largest gas fields in Russia. This valuable investment is of strategic significance for Europe's gas supply. Uniper's E&P business in the North Sea is under strategic review. Uniper will be able to build on existing, proven synergies between generation, trading, and the midstream gas business. Even in markets with low commodity prices, these businesses continue to generate good earnings. In short the established energy world will ensure reliability and supply security as the energy transformation moves forward. Uniper has indispensable businesses, a wide range of outstanding technological capabilities, and exciting business prospects.

E.ON focus: new energy world

The emerging new energy world is oriented toward customers' changing needs. Customer proximity is the key success factor end, energy efficiency is the watchword. Small–scale distributed energy solutions rooftop solar panels, micro CHP units, and battery storage devices are as much a part of this world as increasing connectivity and the ongoing growth of renewables. Customers want sustainable energy solutions.

At the same time, the role of distribution networks is changing. Electricity no longer flows in just one direction (from power plants to customers). Networks are becoming smarter, enabling them to transmit dana as well as electricity. As energy and data hubs, distribution networks are essential infrastructure for new energy world.The trend toward an Internet of things has reached the energy business, creating new opportunities for innovative, data–based products and services. This future imply that grid management complexity increases in the contest data needs, physics, unpredictability and also that grid increasingly become a back up machine [6]. E.ON is bringing, the new energy world to life using strategy based on three fundamental market trends and the corresponding growth businesses: the global growth of renewables, the increasing significance of smart distribution networks for a cleaner energy world, and the increasing individuation of customer needs [10]. E.ON's goal is to be leading provider of energy solutions and to be customers' partner of choice for innovative energy solutions. To achieve this aim, it will focus on three core businesses: renewables, energy networks, and customer solutions. The interplay between these businesses will enable E.ON to develop solutions tor the new energy world, such as sustainable solutions for cities and custom–tailored offerings for industrial customers.

Customer solutions: About 33 milion customers in Europe and Turkey already rely on E.ON's competitive products and services. E.ON is working with European and American startups to design cutting–edge energy solutions. Program is nurturing businesses ideas developed by his own employees and by people outside company. Going forward E.ON intend to enhance his position as a pioneer in innovative customer solutions.

Energy networks:E.ON's 26 milion network customers give him a broad platform for establishing and expanding new end–customers businesses. With a total system lenght of more than one million kilometers, E.ON is already one of Europe's largest network operations and in many regions an innovation leader. It intend to upgrade distribution networks and make them smarter so that customers can take advantage of new products and services in areas like energy efficiency and distributed generation.

Renewables: With about 4.5 GWh of renewables capacity (primarily wind capacity in the United states and Europe), E.ON already rank among the biggest and most experienced players in the global renewables business. Two more large offshore wind farms will become fully operational this year, further underscoring his pacesetting role offshore wind. E.ON intend to further expand his wind power business in Europe and other selected

target markets and strengthen solar business. In a short, E.ON's focus in the new energy world will be enhancing their customer orientation, developing and deploying new downstream business models and products, and leveraging the digital transformation. E.ON's Board of Management will strengthen and reposition the E.ON brand, expand his international wind business, establish substantial solar, battery–power, and energy efficiency businesses, surpass regulatory cost benchmarks in his distribution business.

THE UNIPER GROUP AFTER THE SPIN–OFF TAKEN EFFECT

Once the spin off takes effect, the Uniper Group will become a legaly and economically independent group in the energy sector [25]. Uniper SE will become the ultimate parent company of the Uniper Group, which will be one of the important players in the areas of conventional energy generation and energy trading in Germany, Europe and Russia, with generating capacity of approx 40 GW in the 2015 financial year and adjusted EBIT of about € 801 million (2014: € 826 million, 2013: € 1,048 million) and revenues of € 92.12 million in 2015 financial year (2014: € 88.23 million, 2013: € 94.75 million). The Uniper Gruop will principally operate in areas of electricity generation, and electricity gas, coal, freight, liquefied natural gas and oil trading, in gas storage facilities and in the course of participations in gas infrastructure. In addition, it will also trade carbon allowances. Its customers will be wholesale and business customers in the first instance, which also include, among others, network operations, municipal utilities and other energy distribution companies.

Table 3. Schematic overwiew of the segments and activities of the Uniper Group [25]

Uniper Group				
Segments				
	European Generation	Global Commodities	International Electricity Generation	Administration/ Consolidation
Activities	Hydro power Nuclear Power (Sveden) Fossil Generation Other	Electricity Gas Yuzhno Russkoye Gas Field Coal&Freight/Liquefied Natural Gas/Oil	Russia Brazil	

Based on adjusted EBIT, the Uniper Group's operating business will focus on Germany, Russia and Sweden. Furthemore, the Uniper Group is active in particular in Great Britain, France and the Benelux countries as well as in the USA. The operating activities' future focus will also depend on whether and to what extent the Uniper Group intends implements any measures for portfolio optimisation. For this purpose, group–wide optimisation programmes will be implemented, among others. Corresponding measures are being examined comprehensively at present, with the aim to complete such measures by 2018. The measures will probably encompass three components, namely cost reductions, the analysis of capital exenditure and the further optimisation of current assets. In addition, the Uniper Group intends to make portfolio sales worth at least € 2 bn for debt repayment purposes. The criteria applicable to a portfolio sale are limited overlaps and synergies with the remaining portfolio and the reduction of cluster risks in the overall portfolio. In total, these measures will lead to a reduction in the number of employees of the Uniper Group. Uniper's portfolio is very focused and consist attractive assets across Europe and Russia with diversificate revenues.The following figure represents stakes in EBITDA of Uniper's business areas:

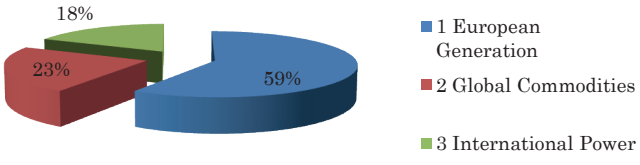


Figure 6. EBITDA Uniper's segments for 2015 [29]

The above figure shows stakes in EBITDA of Uniper's business areas and it presents that 59% of EBITDA is European Generation, 23% of EBITDA is Global Commodities and 18% of EBITDA is International Power. European Generation consists Hydro Power, Fossil Generation, Nuclear Power in Germany, Sveden, United Kingdom and other countries. Global Commodities's revenue comes from the electricity and gas trade. International Power refers to Generation in Russia and Brazil. Now, it is one of largest European generators with 31 GW of own, mostly dispatchable generation capacity with diversifed base across technologies and main markets.

Some indicators of Uniper's 2016 first half results

When the spin off takes effect the Uniper Group will become a legally and economically independent group in the energy sector oriented to a conventional energy world. The prospectus of Uniper First half results of 2016 was publiced at 22–nd August 2016. The following figure represents Net Income of Uniper Group in first half of 2015 and 2016.

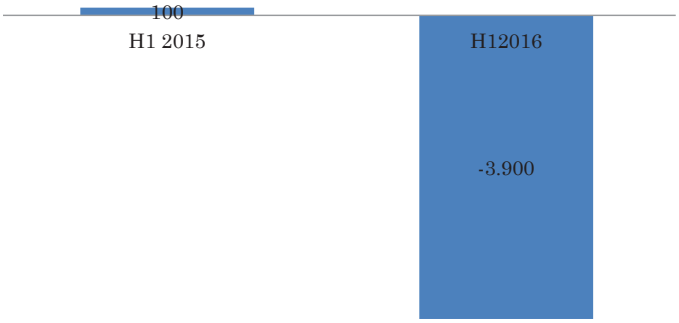


Figure 7. Net Income Uniper Group (million €) [29]

The above figure shows that in first half of 2016 there was significant fall of Net income in regards to same period in 2015, in other words, reasons of Net loss are Impairments European Generation, Impairments Gas Storage and Provisions of Onerous Contracts Gas Storage. The following figure represent drivers of Net loss.

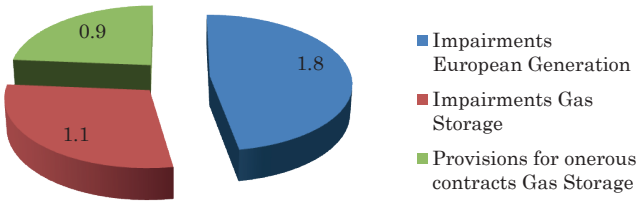


Figure 8. Net loss drivers of Uniper Group (bn €) [29]

The above figure shows that significant negative effects in Uniper's European Generation and gas storage impact bottom line. Total impairment provisions for onerous contracts was €3.8 bn. Impairments in European Generation were €1.8 bn. It takes into account discussions in several European countries with respect to early shut downs for coal plants or the introduction of additional levies on carbon, and it has been taken into account scenario analysis with different lifetimes of the plants. Impairments in Gas Storage were €1.1 bn. It takes into account that Gas summer/winter spreads have narrowed and sucurity of supply is no more appropriately rewarded by the market. Provisions for onerous contracts Gas Storage were €0.9 bn. It takes into account valuation reflects a changed assessment in terms of the sustainable market outlook for onerous contracts for gas storage Europe. However, Global Commodities drives positive H1 2016 Group EBIT(DA) performance, and following table represent this first half results:

Table 4. EBITDA Uniper Group H1 2016 [29]

EBITDA (mil. €)			
mil. €	H1 2015	H1 2016	+/– %
European Generation	515	406	–21
Global Commodities	420	1.165	>100
International Power	150	5	–97
Admin/Consolidation	–85	–36	–58
Total	1.000	1.540	+54

Table 5. EBIT Uniper Group H1 2016 [29]

EBIT (mil. €)			
mil. €	H1 2015	H1 2016	+/– %
European Generation	195	120	–38
Global Commodities	334	1.095	>100
International Power	106	–39	<100
Admin/Consolidation	–90	–41	–54
Total	545	1.135	>100

The above tables shows that EBITDA and EBIT results in first half 2015 and 2016 financial year. Conclusion is that Global Commodities drives positive H1 2016 Group EBIT and EBITDA performance.Well then, Global Commodities with its good results surpassed losses of the European Generation and International Power.

THE E.ON GROUP AFTER THE SPIN OFF

After the spin off has taken effect and the Deconsolidation Agreement has been implemented, Uniper SE, previously part of the E.ON Group, and its subsidiaries will form the independent Uniper Group, and thus cease to be members of the E.ON Group [25]. However, when the spin off takes effect, E.ON SE will hold an indirect stake of 46.65% in Uniper SE's share capital. As a result of the spin off, the E.ON Group will focus its business operations on the Energy Networks, Customer Solutions and Renewables.

Table 6. E.ON Group's business areas and activities after spin off [25]

E.ON Group					
Business areas	Energy Networks	Customer Solutions	Renewables	Non Core	Group Management
Aktivities	• Germany • Sweden • Central Europe East & Turkey	• Germany • Great Britain • Other	• Onshore wind/ Solar • Offshore wind/ other	Preuseen Elektra Uniper	Group Management Business services

The above table shows fundamental business areas of the new E.ON Group: 1. Energy Network with its assets in Germany, Sweden and Central Europe countries and Turkey, 2. Customer solutions in Germany and Great Britain, 3. Renewables which consist Onshore wind and Solar and Offshore wind. In addition E.ON Group consist Non Cor activities and Group Management.

Some E.ON Group's financials in the first half of 2016

E.ON Equity story 2016 approachable on [20] published Group financials in first half of 2016 year. The following figure represent Group's Business areas contribute to EBIT in 2015 financial year.

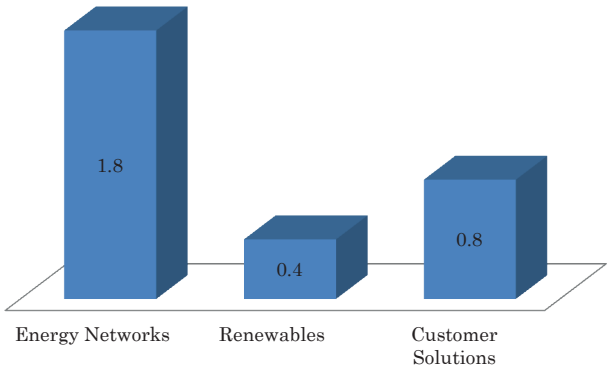


Figure 9. E.ON's Business areas contribute to EBIT in 2015 (bn €)[20]

Energy Networks is the stable earnings backbone. Positive driver for Energy networks in 2016 was start of new regulatory period in Sweden, and negative driver were one–off effects in 2015 especially from provision release in Germany. Renewables and Customer Solutions growing in 2016. Renewables's contribute to EBIT was 13%, Customer Solutions's contribute to EBIT is 27% which make contibution to E.ON's EBIT of 40%. Consequently, E.ON group is focused to new energy world because new business areas in energy value chain contribute to EBIT 40%. Moreower, Energy Networks earnings include additional components focused to new energy world. Renewables have earnings increase from new capacities, for 2016 driven by full–year contribution from offshore windfarms Amrumbank and Humber. Customer Solutions growth through increased customer focus. Positive Customer Solutions' drivers for 2016 are margin expansion and reduced costs outside Germany and normalized weather in Sweden. Negative driver for 2016 was one–off in 2015 from provision release in Germany. Total Core EBIT was €2.6 bn including Corporate Functions/other with loss €0.4 bn.

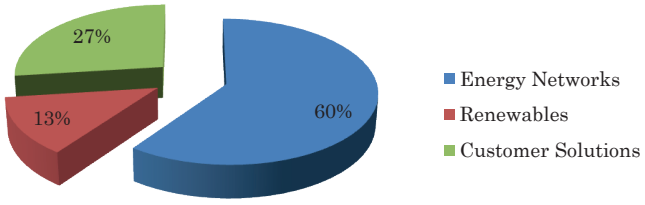
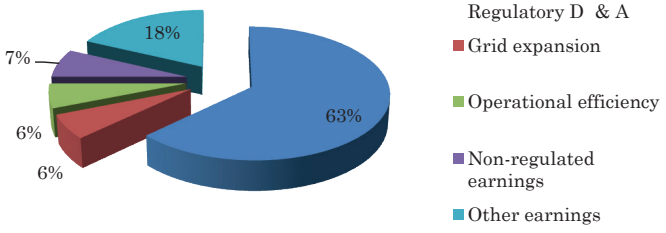


Figure 10. E.ON's Business areas contribute to EBIT in 2015 (%)[20]

The above figure shows that Energy Networks 60% contribute to E.ON Group's EBIT, Customer Solutions 27% contribute to EBIT and Renewables 13% contribute to Group's EBIT. Consequently, Customer Empowerment Strategy and Shaping Markets 40% contribute to E.ON Group's EBIT, in other words 40% E.ON Group's earning form part of new energy world with shapinh customer's expectation and shaping markets by diferentiation strategy. In addition, 37% Energy Networks earnings include additional components which following figure represent:

Figure 11. Additional components contribution to E.ON Energy Networks EBITDA (%) (2015) [20]



The above figure shows that Grid expansion 6% contribute to E.ON Goup's Energy Networks EBITDA, operational effeciency 6%, non–regulated earnings 7% and other earnings contribute to E.ON Goup's Energy Networks EBITDA 18%.

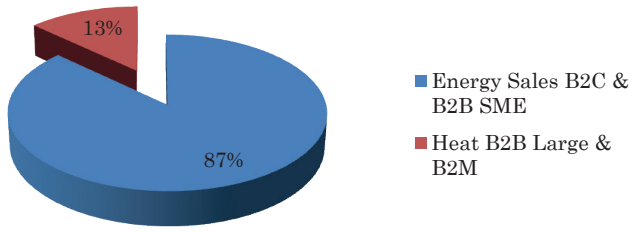


Figure 12. Segments contribution to E.ON Customer Solution EBIT (%) 2015 [20]

The above figure shows that segment Energy Sales 87% contribute to E.ON's Business Area Customer Solutions EBIT, while segment Heat contribution is 13%. Taking in consideratation contribution E.ON's Business Area renewables, comes to a conclusion about significant E.ON Group's earnings in all three bearable pillars of new energy world.

CONCLUSIONS

A large number of energy companies in the world today a faced with global transformative trends which devastatingly affect their business results. Therefore, energy companies in the world were very slow in investing and adopting renewable energy sources and become significantly overcapacitated by coal and gas fired power plants which are now unprofitabile due to low marginal costs of renewables and their priority dispatching into a power system. Also increasing the share of renewable energy sources in the structure of electricity generation, the decline in primary energy prices (fossil fuels) the stagnation of consuption and the surplus of supply in relation to electricity demand caused a drop in wholesale electricity prices by half compared to 2008. Furthemore, the operation of coal fired power plants is burdened with carbon dioxide emissions. As a result, there has been a significant reduction in revenues, falling stock values (for example German's „Big 4" have lost 70 of their market capitalization) and the collapse of credit rating of many energy companies in the world. The crisis has trigered significant reorganization plans and write–offs and an intense search for new business models.

This article analyses E.ON Group's response to global transformative trends in energy market enwironment. As a result of changes in the market environment, the traditional energy value chain is fragmenting into a increasing number of different market segments, one of which is grouped into a new world of energy and other into a conventional world of energy. Consequently, E.ON Group is divided into two very focused and dinamic companies, one of which is focused into a new world of energy and other into a conventional world of energy. New world of energy is based on renewables, decentralized energy generation, customer solutions and smart grids. Conventional world of energy refers to generating power throught large–scale plants on coal and nuclear fuel. New E.ON Group focused into a new world of energy, as a response to global transformative trends in energy market enwironment, implemented Customer Empowerment Strategy and Shaping Markets, in other words using Diferentiation strategy develop new business model innovation in generation power. Consequently, E.ON shapes expectations of customers and design energy market. Now, E.ON Group realize sucessful global diferentiation which which is look at in shaping markets, by empowering customers which become active partners in distributed generation power, at the other words E.ON become lider in new energy world. Other divided company is focused on conventional world of energy and realize Cost Management Strategy to reduce costs and increase competitiveness. The company's separation also involved shortcoming that are reflected in loss of sinergy and economies of scale as well as other costs incurred during the separation. However, E.ON's and Uniper's Board of Management concluded that positive effects of the division will overcome this disadvantage.

REFERENCES

Banks, John P./Wood, Lisa V., The Flexible and Evolving Power Distribution Grid, Brookings, Prosinac 2014.

Banks, John P., Millennials and the Future of Electric Utilities, Srpanj 2014.

Berlo, Kurt/Wagner, Oliver, stadtwerke–Neugrundungen und rekommunalisierungen, Wuppertal institute for Climate, Environment and Energy, Rujan. 2013

Bontrup/Marquardt analize in detail the economic situation of the „Big 4", their crisis respone and future perspectives. Bontrup, Heinz–Josef/Marquardt, Ralf–Michael, Die Zukunft der grosen Energieversorger, 2015

Fratzscher Susanne (2015) The Future of Utilities: Extinction or Re–Invention, Published by the Heinrich Boell Fundation, str 1–24

Humayun Tai principal, Mckinsey & Company New utility business models, HEPG session, Prosinac 2013

Kind, Peter, discruptive Challenges: Financial Implications and Strategic Resposes to a Changing Retail Electric Business, for: Edison Electric Institute, Siječanj. 2013.

Shively, Bob/Ferrare, John, Understanding Today's Electricity Business (2012), str. 101–116

Tenbrock, Christian, Riesen Taumeln im Wind, Zeit Online, Rujan, 2013

Teyssen J., Schafer K., Winkel M., Press Conference E.ON SE, Prosinac 1, 2014

Teyssen J., Schafer K, e.on restructuring concept home.intranet.eon.com/one2two (2015)

Wildhagen, Andreas, Die letzte Schlacht der Stromkonzerne, WirtschaftsWoche, Lipanj 24, 2014

Publikacije/izvještaji/elaborati

Agentur fuer Erneuerbare Energie (AEE) 2015.

Agentur fuer Erneuerbare Energie (AEE) 2013.

AG Energienbilanzen, Ausgewahlte Effizienzindikatoren zur Energiebilanzen Deutschland (1990–2013) (2014).

American Wind Energy Association (AWEA), US Wind Industry Fourth Quarter 2014

Association of the German Energy and Water Industry (BDEW), Siječanj. 2015.

Bloomberg New Energy Finance (BNEF), Global Trends in Clean Energy Investmennts: Rebound in Clean Energy Investments Beats Expectations, Siječanj 2015

Deloitte, The new math: Solving equation for disruption to the US electric power industry, 2014.

E.ON Equity story 2016 dostupno na http://www.eon.com/en/investors/events/analyst–and–investor–conferences/2016/4/26/eon–strategic–financial–update–uniper–capital–market–day.html

E.ON press relase, E.ON moves forward with transformation: key organizational and personnel decisions made, Travanj 27, 2015

Frankfurt School — Unep Centre/BNEF, Global Trends in Renewable Energy Investment 2015

German Federal Ministry of Economic Affairs and Energy, Baustein fur die Energiewende: 7 Eckpunkte fur das „Verordnungspaket Intelligente Netze", Veljača. 2015.

GTM Research and Solar Energy Industries Association (SEIA), US Solar Market Insight Report: 2013 Year–In–Review, 2014.

Izvještaj Uprava E.ON SE, Dusseldorf i UNIPER SE, Dusseldorf o spin–off–u većinskog udjela u Uniper Grupi (2016)

Institute for Electric Innovation (IEI), 2014

Solar Energy Industries Association (SEIA), Solar Market Insight Report Q4 Prosinac 2014, .

The Economist, European utilities: How to lose half a trillion euros, Listopad, 2013

Uniper First half results 2016

US EIA, Annual Energy Outlook, 2014.

Utility Dive, 2015 State of the Electric Utility, Siječanj 2015

Wirtschafts Woche, Aufspaltung des Energieriesen: Kommt E.Ons Not–bremse zu spät?, Dec. 10, 2014 (translated).

www. Izvori:

www.pwc.com/utilities

www.finanzen.net

http://www.bmwi.de/EN/Topics/Energy/Electricity–Market–of–the–Future/green–paper,did=679748html