

**Capgemini's World Energy Markets Observatory report 2018:
China's importance to energy market rises, while climate targets are still in
question, and the Utilities landscape is changing fast in the wake of
accelerated digital transformation**

- *China becomes a dominant player in the energy space*
- *Paris 2015 Climate Accord targets could slip out of reach, as economy rebounds*
- *While the Utilities landscape rebounded with renewed financial strength, the need to accelerate their transformation heightens as competition from new players emerges*
- *All segments of the value chain are impacted by digital transformation*

Paris, November 6 2018 - [Capgemini](#) has today published the twentieth edition of its annual study, the [World Energy Markets Observatory \(WEMO\)](#) report, created in partnership with [De Pardieu Brocas Maffei](#) and [Vaasa ETT](#). The study reveals China's role as a leading worldwide player in technology, equipment and Utilities ownership, and highlights that global economic growth has increased energy demand and leaves long-term climate change targets in question. This is despite a year that saw both fast-rising European carbon prices and falling renewable energy costs. Meanwhile, fossil fuel price increases have led to price rebounds in wholesale electricity and gas markets, notably in Europe. In turn, Utilities are showing improved financial health, and the overall landscape is changing. They are adapting their business models with new technologies such as IoT, AI, chatbots, and blockchain as competition from new players emerges. All segments of the value chain are impacted by digital transformation, from client relationships and operational processes, through to grids and interactive services.

The four main findings of the 2018 edition of the World Energy Markets Observatory report are:

1. China, the world's second largest consumer of energy, leading emitter of Greenhouse Gases (GHG), significant energy equipment supplier, and key player in critical resources, has also become an important investor in electricity companies

Energy requirements are constantly growing in China, which in 2017 increased its imports of Liquid Natural Gas by 46%, making it responsible for 30% of the growth in global demand. Pollution levels remain a concern and China is the world's biggest emitter of GHG. China has a long-term policy of developing equipment for domestic usage first before selling it internationally. It is aggressively exporting coal-fired power plants (with 700 currently under construction), photovoltaic solar panels (of which it was responsible for almost half of newly installed worldwide capacity), and wind turbines. According to the report, electricity storage and electric vehicles, as well as nuclear reactors, are likely to be the next wave of Chinese equipment exportations. China also has a dominant share (95%) in the worldwide production of highly sought-after rare metals and rare earth elements needed for energy transition. Finally, China's decade-long dynamic acquisition policy, mainly in Africa, South America and Asia, has now extended to Europe's electricity networks and utilities.



2. Economic growth puts into question climate change objectives but has in turn driven electricity and gas wholesale market price rebounds, improving Utilities' financial health

After three years during which GHG emissions had stagnated, in 2017 they increased by 1.4 percent, driven by economic growth that stimulated increased energy demand. The already fragile climate change objectives of the [Paris 2015 Climate Accord](#) could be threatened, despite the significant rise in carbon prices (up in Europe from €5 per ton in early 2017 to €20 early September 2018), resulting from the rebounding global economy and the European Union measures.

According to Colette Lewiner, Energy and Utilities senior advisor at Capgemini: *"In 2017, a stronger economy meant Greenhouse Gas emissions rose for the first time in several years; as a result of the 2050 climate change objectives may well not be met. The European Union has taken some measures, but they are insufficient to reach a meaningful carbon price, of around €55/ton. For this to be achieved, carbon floor prices would be needed at either regional or national levels."*

3. Renewable energy and storage prices continued to decrease, but tech limitations and cost of development means full renewable generation is far off for the majority of countries

During the past 12 months, the costs of renewable energies have continued to fall (-20% for solar photovoltaic): onshore wind and utility scale photovoltaic (PV) costs are becoming competitive almost everywhere (without including extra grid costs) compared to most traditional electricity generation resources. Battery costs are following the same downward trend. This combination could lead some countries, such as Denmark, to set goals for a 100% renewable generation mix. However, at the large country or state level, even with battery storage, this type of grid is not manageable at present because of limitations in the technology, intermittency management, and huge implementation costs.

4. The Utilities landscape continues to evolve along with the renewed financial health of industry players, while new challenges emerge

A slight improvement in the financial positions of Utilities had been reported, notably in Europe, thanks to wholesale electricity and gas market price rebounds and transformation achievements of industry players. This situation has led to a landscape transformation and merger and acquisition activities, each country having its own transformation path: German utilities are concentrating on value chain segments, the UK is correcting some liberalization retail market consequences with new regulations, Asian markets are starting the deregulation process, and new players are entering the markets everywhere.

Perry Stoneman, Head of the Energy, Utilities & Chemicals sector at Capgemini, comments: *"We observe Oil and Gas majors playing in the retail and renewables markets with significant resources and ambitions. Meanwhile, the Utilities landscape is changing fast. All segments of the value chain are impacted by digital transformation, from client relationships and operational processes, through to grids and interactive services, with a huge potential to decrease costs. Utility incumbents need to accelerate their transformations and step up their focus on new service-based business models as competition from different domains including new entrants, oil majors, retailers, and GAFAM¹, is increasing."*

The World Energy Markets Observatory is an annual publication by Capgemini that monitors the main indicators of the electricity and gas markets in Europe, North America, Australia and South-East Asia, and reports on the developments and transformations in these sectors. This 20th edition, which is drafted mainly from public data combined with Capgemini's expertise in the energy sector, refers to data from 2017 and

¹ Acronym for the five most popular US BigTechs: Google, Apple, Facebook, Amazon and Microsoft



winter 2017/2018. Special expertise on regulation, climate challenges, and customer behavior has been provided by research teams at De Pardieu Brocas Maffei and VaasaETT.

You can download a full copy of the report, infographics and podcasts [here](#).

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