

Towards a low-carbon future

Q&A with Carlo Perrone

Carlo Perrone is Director of B2B for Engie Italia, a division of the French energy giant Engie (formed from the merger of Gaz de France and Suez in 2008), which provides energy and energy services across 80 countries and in all continents.



The world has finally woken up to the danger of global warming, and Engie has positioned itself as a front runner in the delivery of low-carbon energy and the development of cleaner technologies.

How was the energy industry shaped 15 years ago?

Until recently, the energy industry was dominated by state-owned monopolies, which focused on growing their capacity to meet the energy demands and on becoming more cost efficient.

The industry used the fuel that was available, so if your country produced coal, then you burned coal, and if you ran out of coal then you looked for alternative fuels such as gas. There was little regard to emissions or to the environment, and while there was a growing awareness of cleaner technologies (such as renewable energy), this was largely the domain of scientists.

How did the move towards clean technologies come about?

Suddenly, about 15 years ago, the price of oil rose from USD 15 a barrel to USD 50, and then to USD 100 in 2008. And while fossil fuels became increasingly expensive, advancements in cleantech made renewable energy more efficient, closing the price gap between traditional and renewable sources. At the same time, there was growing awareness of climate change, especially in the West. EU leaders had already set targets that aimed to raise the proportion of energy consumption produced from renewable resources to 20% by 2020 and to reduce EU greenhouse gas emissions by 20% from 1990 levels. Cleantech was becoming important, and large utilities companies were trying to acquire these technologies or to develop them. Today it is an important and profitable sub-segment of the energy business.



How has Europe driven the change towards cleantech?

Initially, the key drivers were financial. Penalties were imposed by the EU on countries that failed to meet climate-change targets, and so governments introduced incentives to the energy industry to help attain them. First, schemes were introduced that gave money – in some cases a lot of money – towards investments in renewable energy. Later incentives focused on the reduction of energy consumption – offering refunds on investments that reduced consumption by plants. So, in the past decade, we have seen a wave of large installations of solar plants and wind turbines across Germany, Italy, France, Spain, and the UK.

At what point did Engie decide to focus on cleantech? What prompted this change in strategic direction?

Engie recognized early on that the energy sector was in transition and that some of the traditional technologies could not survive in the long-term, for example producing electricity from coal. We wanted to become the frontrunner in this trend by investing in technology that would allow countries to have stable, reliable, and clean energy systems and energy services. We therefore developed a strategy based on a balance between totally clean energy sources (renewables) and the cleanest of the existing sources, which is gas. We had to implement our new stance: we stopped the coal production side of the business, and discontinued our oil exploration and production business too – selling or shutting down plants everywhere around the world. As a result we are a completely different company today than we were six years ago, focused on producing for the cleanest sources and on helping our clients reduce their energy consumption.

Would someone have predicted the changes in the energy industry that have taken place over the last 15 years?

Probably not. One could have expected that once governments had set targets on emissions and efficiency, they would somehow incentivize the system to help achieve them. What was less predictable was the magnitude and extension of incentives to renewables and how widespread the uptake would be. You did not need to be a large player in energy to put a solar panel on your roof, so there was a lot of new, fragmented capacity arriving. Energy has become something that all businesses and individual consumers can do, and energy production is becoming delocalized and fragmented. This delocalization brings new technical complexity to address. We need a different way to control

and balance the grid. We already had systems to control when people were withdrawing energy, but now we need to develop technologies to control when people are injecting energy and how to store it better.

Has the energy industry responded by becoming more agile?

Advances in technology have opened up opportunities for new players to enter the industry. Twenty years ago, large multinational technology companies were developing and manufacturing items of equipment worth EUR 100 million for the energy industry, and there were barriers to entry. With the arrival of cleantech, even two guys working in the garage can write a piece of software that helps to run the grid better, and this is creating a world of smaller-scale companies, which are, or can become, relevant. Engie is looking at these start-ups or small companies with interest and sometimes joining forces with them, either by adopting their technology or purchasing a small stake in them, and this is where Clairfield's support becomes invaluable.

Is this fragmentation, within the industry reflected in the scale of deals being done?

Ten years ago, the industry was only doing utility-to-utility deals so, for example, a utility company in Germany would buy utilities in the Netherlands, and these were big deals over EUR 10 billion. Today, with Clairfield, I am working on deals of EUR 10 million, not EUR 10 billion, but I am doing ten of them in one year, diversifying Engie's profile.

What other advances or changes in cleantech are likely in the future?

Research and development in this sector has focused largely on increasing supply and bringing down the costs for renewable energy solutions for wind, solar and hydro-electric. This work will continue, but today, there is a multitude of different clean technologies being developed – based on hydrogen, bio-gas etc. – and research has diversified. I'm not including nuclear in the frame, because nuclear is a technology that not every country is considering and some of those using nuclear energy have a specific intention to exit this market.

Can the industry move more quickly to a low-carbon future?

Unfortunately, the energy system cannot currently cope by using renewable energy alone. Most renewables sources are unpredictable, for example the sun does not always shine and the wind does not always blow, which means we can't rely on solar and wind power to have a real-time system which provides energy to people when they need it. We must therefore balance this system with another energy source that allows us to predict and control the time and the way that energy is put into the grid, and this is where gas (which is three or four times cleaner than coal) can help. Engie believes that a mixed use of different energy sources is important for the stability of the system.

What are the differences in uptake of cleantech across different markets and different geographical areas?

The adoption of cleaner energy is not at the same level in different countries, and it is not moving at the same speed. The focus on renewable forms of energy began in Europe in the late 1990s, where there was an awareness of climate change, and the EU has continued to be the frontrunner in this sub-sector of the industry. The US has moved in and out of the climate-change program, depending on which administration is in power and on the support it wishes to give to the coal or oil industry.

Significantly, over the past 20 years, India and China have become the two main global users and producers of energy, and they also didn't begin with the cleanest technology, but with the cheapest, which was usually burning local coal. But then, quite rapidly, there has been a move towards the development of renewables in China too. Globally we need to do more to catch up as we now have emissions that weren't there 20 years ago.

Does Engie offer the same services across all countries?

Our strategy is to bring the full spectrum of Engie's low-carbon energy production and energy services to all parts of the globe. In each

country we had a different starting position, depending on the local historical profile of the sector, or on our entry point, sometimes with energy, others with the services.

What are the barriers to the transition to cleantech?

In many cases, the barriers are regulatory. Laws which provide financial incentives to implement cleantech or which enable the sector to move forward are either coming too late or there are problems with their wording. This can mean that time is lost in transitioning to a low-carbon world. However, these problems can be very local, depending on the different laws/regulations in each country.

The industry needs stability as well as good regulations. In Italy, for example, there were regulations strongly supporting renewable energy until 2013, but since then there have been a few years of uncertainty, and operators hesitated to invest in cleantech. When we make an investment decision it is not for ten months, it is for ten years. So, if there is uncertainty that the next administration will no longer provide the incentives and support, we find it difficult to invest.

What is Engie doing differently from other industry players?

Right now, there are financial incentives and social pressures driving forward cleaner technology and we all have a moral duty to move towards this goal. Not acting today would be the wrong choice: we must leap into that revolution. ENGIE is responding to the current disruptive transition in energy with diverse actions. We decided to embrace the energy revolution and be a forerunner by paving the way to a future where the customer, increasingly aware and demanding, plays a central role. Compared with other large energy players we are more diversified, which means we can join up solutions. We provide both energy and energy services and this means that we have 167,000 people around the world who are not only running or developing energy infrastructure and delivering energy, but also maintaining the equipment and providing services for our clients. This means we are involved in the system much more and it is a dimension that other energy companies don't have. Our strong position in renewable power generation and global services allows us to build innovative offers using digital solutions, new technologies, and creative business models. I don't hesitate to say that currently, ENGIE may well be the most proactive energy company.

This is a service that makes us different and it is competitive advantage that I can point to when I talk to my clients. Dialogue among all those promoting the adoption of cleaner and decarbonized solutions is essential, and we are working in this direction. ■

