

# Closing speech



## Olivier Appert, Chair, Conseil Français de l'Énergie

I have the challenging task of presenting the conclusion of this Forum – an impossible task due to the very rich presentations and discussions that we have had. I will therefore present my personal comments, which may be slightly provocative.

I started my professional activity in 1973 during the first oil shock and I have been involved in the energy sector since that time. This long experience means that, when I hear certain politicians or media, I have a distinct feeling of déjà vu. In 1973, everyone was looking for a panacea and waiting for breakthroughs that would solve all our problems. That is still the case today. People are still dreaming of those same panacea and breakthroughs. However, something has changed, as demonstrated by the following anecdote.

In 1979, André Giraud, the then French Minister of Industry, was approached by an inventor with a new concept of water engine. The inventor advised that foreign companies were offering him millions for this invention but he wanted to create jobs in France. André Giraud told the inventor not to miss this opportunity and to sign immediately with the foreign firms. Today, in the context of the Internet and social media, no politician would take the risk of being criticised for missing an opportunity to create jobs in France. It is not always easy to evaluate the costs and economies of new technologies. But it is mandatory to evaluate these figures at each time of development. I am convinced that it is not possible to build sustainable business models for new technologies on the basis of non-sustainable subsidies.

When it comes to energy technologies, we need to consider why the panacea did not emerge. Let me provide several examples that are still topical. First, hydrogen. The first combustion engine in 1805 was fuelled with hydrogen – the “cycle de Beau de Rochas”. The fuel cell was invented in 1829. The hydrogen economy was invented by Jules Verne in 1872 (“Vingt milles lieux sous la mer”). In 1973, everyone was convinced that the hydrogen economy was on its way. At the time, there was a consensus that, thanks to France's nuclear energy programme, the hydrogen car was to be available as of 1985.

There were also references to nuclear fusion in 1973. This was considered the game changer than would be deployed 50 years' later. Today, this is still not the case. We are spending billions of dollars, and told that this will be the panacea at the end of this century!

A final example is that of electricity storage, where there is a general consensus today that this is a priority. However, in the European Strategic Energy Technology Plan of 2008, there was no reference to electricity storage at all. Nor was there any reference to today's other game changer: the digital transition.

Will there be breakthroughs in the future? I hope so. However, in my experience, we cannot simply decide that there will be a breakthrough. Politicians and the media cannot decide on the breakthroughs that will occur. Instead it is necessary to work seriously on possible breakthroughs. When it comes to energy storage, we have to learn the lessons of the past and think about what could be the game changer of the future, in a context of digitalisation. We talk about smart grids and smart cities – it seems that nothing can happen if it is not smart! Clearly, however, our cities will change, our cars will change, and our networks will change. We need to consider seriously the opportunities and threats for the energy sector.

As stated in our last roundtable, it is not possible to invest in all technologies at the same time and in the same way. We must therefore prioritise our research policies. We need to consider the maturity of each technology, their TRL (*Technology Readiness Level*), their cost and economic profitability. It is necessary to treat differently the technologies that are at pre-lab stage (those at proof of concept level) from those that are further along in their development.

I was struck by the fact that, while electricity only represents 20% of our overall energy consumption, it represented 95% of all comments made. That is the case in the public debates and, unfortunately, the case in too many fora. In the last 2 days, we had many discussions on electricity and few discussions on the rest of the energy scene. Is that because all the relevant solutions will emerge from the electricity sector? Is that because there are no real issues with the remaining 80% of energy consumption? Is that because we do not know how to solve the problems associated with that 80%? We talked extensively about wind and solar, but they represent only 0.5% of primary energy consumption. When and where will we discuss the 99.5% of primary energy consumption: heating, transport, and industry? I believe it is important to take a wider perspective and a wider debate on all of these issues, without ignoring the most important part of energy consumption in the coming decades, in France, in Europe and in the world.

When it comes to energy efficiency, we all agree that this is the most important issue we face. However, only a few concrete actions were presented in these 2 days by companies and by industry. I am somewhat puzzled by the mismatch that exists between political and media statements and the reality of efforts on the ground.

You should note that all of the presentations made in this meeting will be available on our website. The Minutes of the meeting will also be available in the next 2 to 3 months. I hope to welcome you to our 6<sup>th</sup> European Energy Forum in 2017. Before that, I hope to see you all in Istanbul for the 23<sup>rd</sup> World Energy Congress.

I would like to thank you all for your active participation in this 5<sup>th</sup> European Energy Forum, and I wish you all a safe journey back home.