



Mr. Philippe Huet honored us with his presence as speaker for a conference organized by the Harvard Club of France in conjunction with France-Amériques. The focus of his conference was to bring forth the ideas for a debate on energy transition.

When Mr Huet first came to the electricity sector from the oil and gas sector, his first reaction was : How do you store it? How do you transport it without huge losses of energy along the way?

Storage is the holy grail of electricity especially when speaking of alternative sources.

The current debate on energy transition is not specific to France. It is an international one.

Mr. Huet started by reframing and giving some facts and figures to be able to structure the debate.

The long term challenges:

How do we get more?

It is important to keep in mind that 1.3 BN people have no access to electricity worldwide.

Even though economies are more efficient, demand for energy will still keep increasing due to developing countries and also to the growth in demography.

Major shifts from rural living to city dwelling also effect demand on energy in a particular way.

Therefore, in energy consumption, there is a very wide gap which refers back to the issue: *how do you get more, especially to those who need it?*

The *economics of energy* especially in the aftermath of oil shocks. The incredible increase in the price of oil was very significant for many countries and the cost of energy will continue to increase except of course for the United States that has endorsed the extraction of shale gas.

Another important issue that needs to be addressed is *climate change*.

We are not close to reaching the targets of limiting temperature increases that had been set at 2°C.

The current assumption is that we are closer to 4° and that this may reach 5° to 7° by 2050 due to the greenhouse effect. *How do you accommodate the need for more energy while being affordable and clean and without adding to the burden on the atmosphere?*

Electricity should help to solve some of these problems.

Europe

Cost vs policies:

Most European countries derive their energy needs from fossil fuels. Germany and Finland are very highly into fossil fuels. Spain and Portugal, on the other hand, have a very high share of hydro and nuclear; above 50%. They have taken stock of natural advantages and have pushed towards non-CO2 power generating sourcing. Many others are still reliant on fossil fuels. The cost of energy is highly

dependent on policies. Heterogeneous prices are derived from heterogeneous policies; therefore, policies need to be addressed commonly throughout the EU.

French Scene on *energy transition*. The debate was launched after the new government came to power. There were two priorities: efficiency and renewable energy sources. The government announced the closure of nuclear plants and their determined position against hydro fracking for shale gas. But...

How can we be more ambitious in terms of energy savings?

How do we move to another energy mix by 2025?

We aspire to 50% nuclear, but how?

How do we reduce greenhouse emissions?

What choices need to be made in technology and renewables?

How are these efforts financed?

The previous government had made a hard push towards solar which was not conclusive and hindered national industry.

There are 5 issues:

1 – Nuclear is a key issue; Mr Huet stresses that the issue is not the building of new reactors but extending the life of existing sites.

2 – There is a lot happening on the local levels. New digital technologies allow greater influence on managing utilities. They are best positioned to manage these.

3 – Energy poverty – an issue that was discussed at length at Davos. In a country like France, 9 million people live with less than 900€ a month bringing to the forefront the issue of affordability. 8 million people can't pay their electricity bills!

4 – Improving the efficiency within our living environments. This will be a lengthy and expensive process.

5 – We all want to see more renewable energies: solar, off-shore wind. But they are not available all day, every day and therefore the issue of storage must be addressed.

We want energy to be secure and competitive. We want it to be affordable but we also need to keep in mind the impact it has on the environment.

On the supply side:

There is a need for economic answers because we want clean, competitive, safe and affordable energy. Why keep ourselves from nuclear when solar is still not efficient, shale gas is not permitted, and offshore wind is costly and not close to end user. EDF sees electricity as cleanest, most viable energy.

On the demand side:

This is where we will see breakthroughs in the next few years. We will need to focus on energy efficiency, storage, and where to find it. We will need to build partnerships towards new technologies.

So what does France complain about? We have competitive prices, security of supply, low gas emissions, and efficiency on par with Germany. Nevertheless, we have a debate.

To sum up: key areas that national policies should focus on:

- 1 – Efficient strategies especially in building renovation. The focus of subsidies needs to be properly directed.
- 2 – Push national industry of renewables, particularly with off-shore.
- 3 - We have excellence in nuclear – take advantage of it.
- 4 – Let the local communities have an input and an impact. They are consumactors!
- 5 – Work on energy poverty.



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