

A Movers & Shakers Interview with Mr. Arno A. Evers – Fuel Cell Visionary and Head of FAIR-PR

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Mr Arno A. Evers

Fuel cells are being considered by most industry players as the future of power generation and the substitute to conventional engines because of their minimal air emissions and high efficiencies. However, while fuel cells have yet to be commercialised it is still expected that mass markets will develop before the end of this decade.

Arno A. Evers Fair PR has been organising fairs like HANNOVER FAIR since 1995. Arno's main topic since 1995 has been the Group Exhibit – Hydrogen + Fuel Cells at the annual HANNOVER FAIR. This Group Exhibit has grown to become the largest commercial trade show serving the hydrogen and fuel cell industry. Mr. Evers was previously employed by the former Messerschmitt-Boelkow-Blohm GmbH (MBB, now part of DaimlerChrysler AG) in Hamburg and Munich. Frost & Sullivan interviewed Mr. Evers to get his views on the development of commercial fuel cell markets and the path that should be followed for fuel cell commercialisation.

Rajat Kumar: I would like to start with the main question that is occupying everybody's mind today - when could we have commercial markets for fuel cells?

Mr. Arno A. Evers: The answer is very easy, and the answer is that it can come very soon, sooner than what most people think.

Rajat Kumar: We have been researching these markets for more than 4-5 years now, we asked industry participants in 2001-2002 and they mentioned a commercialisation timeline of around 2005 and now when we talk to them they say that the commercial markets for fuel cells are expected around 2008-2009. This seems to have been continuing for some time.

Mr. Arno A. Evers (laughs): And to add to that, money is running out.

Rajat Kumar: The money indeed seems to be running out, it's the automotive companies that are supporting the fuel cell development.

Mr. Arno A. Evers: They are also running out of money.

Rajat Kumar: So when can we expect the commercial markets to develop?

Mr. Arno A. Evers: The markets can, I will not say will, but the markets can come very soon and the markets would be consumer driven. Currently the fuel cell manufacturers whole attitude is to make it technology-driven. That's a wrong attitude. If you think only about technology, you would get nowhere. If the manufacturers would think of the demand of the people, what they really need, then they can come to a solution.

Rajat Kumar: The industry seems to be in a price-volume vicious circle. The volumes, the manufacturers cannot come until the products are competitively priced and the products cannot be competitively priced until their mass production starts. What is the way out of this vicious circle?

Mr. Arno A. Evers: The way out is to think in terms of a completely new idea, a much wider perspective and a much bigger vision. You must think about what people really want. It could be something in the way of a luxury good and it could be something that in the beginning could only be afforded by a few rich people. But they are prepared; there are so many rich people – in India,

China, Russia and the world. If you make something that they would want to have desperately then they would be willing to pay any money to get that.

Rajat Kumar: What can be expected of national governments in terms of support for fuel cell commercialisation, especially in terms of regulations and regulatory framework?

Mr. Arno A. Evers: Forget the government, with too much reliance on government we would not have air conditioning or colour television in our households. These were also very much luxury goods in the beginning. Life and the quality of life is changing and the mistake that most people make is that they only think in terms of the present, they don't study the past. We need to look into the past to see the future. Through the present we can never see the future because then we become too narrow-minded. Thus, we must think of what would be the successful technology applications of fuel cells. And what we are expected to find out is that it would have something to do with "being personal". Like the computers, they were popular when they became personal computers. A similar technology is the cellular phones, they allow you to make telephone calls to whomever you like, whenever you like. Also, people customise their cellular phones in terms of ring-tones, display pictures etc. In China, the cost of a cellular phone is equivalent to one month's salary. But still people are prepared to save their money to buy a cellular phone. And now they tend to have two cellular phones, which means that they save two month's salary only to have cellular phones.

Rajat Kumar: So do you see more residential or more personalised usage of fuel cells in future?

Mr. Arno A. Evers: The future will be in a combination application. For example, think of a car with a fuel cell. The basic purpose of the fuel cell in the car is to produce electricity. When the car is parked outside the house, office or the supermarket, the electricity produced by the fuel cell can provide power to the house, office or the supermarket. The excess electricity produced could also be sold to the utilities or the supermarket. The people would adopt such kind of innovation. People like to save some money; it's human nature. So, the future fuel cell applications must be such that they allow people to save some money.

Rajat Kumar: When I was talking about the role of the government, I was not expecting a lot of support from them in terms of funding. What I expected was some support from government in terms of establishing regulations and allowing access to the grid and power trading?

Mr. Arno A. Evers: Forget about it, this must come automatically. There was no government support to set up the framework for cellular phones. The network can be made with the demand of the people. The industry will follow very soon and cope with this demand. This is also not restricted to only developed countries. There are also rich people in developing countries and they would be the first users and as the popularity of the system increases its cost would decline just like it happened in the case of air conditioners or cars. In the beginning there were no cars or air conditioning or the Internet and life was not what it is now. It is important that we think of the past to understand the future.

Rajat Kumar: You are correct in saying that rich people would be willing to pay a premium price for the service, but would there be enough rich people for the companies to target with their products?

Mr. Arno A. Evers: The situation was the same with cars and the same with computers. An IBM study not so long ago predicted the sales of only five computers. But look at now. The same is the case with other innovations like the television set. Nobody once believed that every household would have a television set but as the masses adopt the innovation, the prices decrease very fast. The prices of fuel cells similarly would go down very soon and very fast and their use would go up very soon. The Chinese market could help in bringing such a change. The people there are very educated and they have demand for new things.

Rajat Kumar: But, fuel cell manufacturers seem to be targeting markets in North America, Japan and Europe for their products.

Mr. Arno A. Evers: These markets are too small. The fuel cell manufacturers seem to be too short sighted, they should think on a global scale and should find out where the progress is currently and then target those markets.

Rajat Kumar: Do you see a lot of interest in China, are a lot of people manufacturing and researching this technology?

Mr. Arno A. Evers: Of course, there are many activities there. There are students and companies active in China but they are also on the wrong way. They also think in terms of technology possibilities. Nobody seems to be thinking about the market or the delivery time or the guarantee time. But this will soon change. I hope that those companies and individuals who are involved with this technology worldwide would soon consider these things. If they don't realise the importance of these factors, then completely different companies would make the big business. And it's also not necessary that the big companies would dominate the market. The big business could also go to the small companies who are able to meet the needs of the customers very quickly. The big companies tend to react more slowly to the changes in demand slower than the smaller companies.

Rajat Kumar: What kinds of applications are likely to drive the fuel cell markets?

Mr. Arno A. Evers: The future will be in completely different and new applications. The manufacturers must think of completely new applications. It must be a combination of existing applications to get the advantages of synergy. It could be something very simple and easy that would make us wonder why we never thought of it earlier.

Rajat Kumar: Would the combination be only in terms of applications or also in terms of technology like the development of a turbine-fuel cell hybrid.

Mr. Arno A. Evers: The combination would be also in terms of technology, also in terms of personalised production of hydrogen, so that the individuals are completely independent. We are moving towards distributed energy generation technologies and hydrogen and fuel cells could play a very important role in it.

Rajat Kumar: What are the developments in other developing countries like Argentina and Bulgaria?

Mr. Arno A. Evers: The developments are all the same. They are all technology-focused. Only thinking of technology would lead them nowhere. They could work on the technology for the next hundred years and still get nowhere. They need to have a completely different view of the picture. Progress in the last ten-eleven years has not been much. The systems are getting smaller and the density is getting higher but it's not a breakthrough. The breakthrough will be completely different. It could also come from the completely different, smaller companies. Like Bill Gates when he started Microsoft, it was a small company, which defeated big companies like IBM.

Rajat Kumar: We are talking of a new paradigm. But the people who are working on fuel cells are technologically-focused.

Mr. Arno A. Evers: Of course, we need the improvements in technology. I do not want to undermine their efforts. But the technology would always follow; it can never be the leader. The leader will be the demand of the people. Then the mass production will start, luxury goods first and then day-to-day products. It will be completely different from what we see or think today.

Rajat Kumar: But are the consumers aware of the potential and the working of fuel cells, because if they are not then how can we expect the demand to come from their side?

Mr. Arno A. Evers: The demand would come from the new applications; it would not be product but the new service. Maybe something which has to do with education or with elderly or disabled people. But it shall be a completely new service that does not exist today. If I knew I would do it myself (laughs). I don't know it myself. The demand would drive the technology and ensure that the products are created to satisfy their requirements. It would not require too much government support. In the end it would come from the demand of personal power by people. There are a lot of

small companies that are researching the technology and developing applications but even they don't know the value of their research and applications. It also takes the right individuals to do it. It's not a problem of technology but the problem of imagination.

Rajat Kumar: I am sure you would have conveyed this message to the fuel cell manufacturers as well, what was their reaction to it?

Mr. Arno A. Evers: Most of them don't understand it as they are too narrow-minded towards their technology problems. Some of them understand it to some extent, it's a hard job to do and I hope to carry on with my mission.

Rajat Kumar: Frost & Sullivan would like to be a part of this vision and we will try our best to communicate the need of being more market-focused and understanding the needs of consumers to the industry players. It was very interesting talking to you about the marketing and the customer demand perspective and we wish you all the best for all your endeavours.

Frost & Sullivan are currently investigating the potential of the European stationary fuel cells markets. For further information, please contact us on energy@frost.com