



Media release – Interview with Christophe Pillot: February 16, 2018

18th International Automobile Recycling Congress IARC 2018:

Have you already made all your preparations for this year's International Automobile Recycling Congress IARC 2018? If not, then make sure you do so soon, as our sector get-together begins in less than four weeks. Don't miss this unique opportunity to exchange the latest news and ideas with experts from all areas of the automobile recycling industry.

Again this year, our congress has attracted a large number of visitors. So far, over 180 participants from a total of 26 different countries have enrolled for the IARC 2018. This year, we have again put together an interesting and highly diverse program for our visitors. We are particularly looking forward to our keynote speakers:

- DI Christian Holzer (Director General, Federal Ministry of Agriculture, Forestry, Environment and Water Management, Austria)
- Joseph M. Holsten (Chairman of the Board, LKQ Corporation, USA)
- Christophe Pillot (Director, Avicenne Energy)

At the IARC 2018, Christophe Pillot will provide us with his view on the e-mobility market, especially on the future of batteries. Before the conference we asked Christophe Pillot how he evaluates the current development in the market for electric vehicles. You can read his response to these questions here:

- 1. Mr Pillot, electromobility is gaining momentum. Norway leads the way in Europe with a share of almost 40 percent of all registered passenger cars. When will countries such as Germany, France or Italy reach similar proportions?**

You are right, Norway leads the way in Europe with 40 % of all registered passenger cars for PHEV and EV. It was 21 % for full EV. But, the average penetration for PHEV and EV in Europe is only 2 % in 2017, 5 % if we add Hybrid vehicles. For pure EV, major analyst forecast a penetration between 10 and 25 % in 2025.

- 2. What needs to change so that consumers will actually be asking for more electric cars?**

Well, from my point of view, first of all, the battery cost is still too high. The current price is around 200 \$/kwh, that means 8 000 \$ for a 40 kwh pack (Renault Zoe), 20 000 \$ for a 100 kwh pack (Tesla). Most of the analyst forecast a huge decrease of battery price for the future. Whether this will happen remains to be seen. Cell material costs account for more than 50 % of the total cost of the battery pack, and the most

important costs are due to the active cathode material based on Ni, Co, Li, metals with very volatile prices.

3. But the cost is not the only decisive factor?

No, definitely not. Important is also the battery performances in order to increase the range as well as the charge time. Besides that the acceptance of electric cars depends on the life time of the battery and last but not least the charging infrastructure. In these areas there is still room for improvement.

4. Some car manufacturers are setting up their own battery production. Batteries are already being offered for leasing in electric cars. Will this trend intensify and ultimately lead automobile manufacturers to process and recycle batteries themselves?

Some car manufacturers decide to make the battery pack, some others (BYD, Toyota) decide to make the cell. But, the recycling is another business. We think lithium ion battery recycling will be made by specialist, not by car manufacturers.

At the IARC 2018, Christophe Pillot will go into greater detail on the e-mobility market and the challenging future for batteries. We greatly look forward to seeing you at this year's industry meeting! For all the details on the program and how to enrol for it, go to:

<http://www.icm.ch/iarc-2018>

About ICM:

ICM AG is an internationally leading congress organiser that specialises in the field of recycling. With a total of four congresses each year, ICM covers major topics that impact the circular economy, primarily focusing on the recycling of electrical and electronic goods, end-of-life vehicles, and batteries. The congresses are held alternately in various countries of Europe and in Asia. You can find an overview of upcoming congresses at: www.icm.ch.