



ELECTRICAL POWER ENGINEERING EDUCATION: HOW TO BRIDGE THE GAP BETWEEN INDUSTRY AND UNIVERSITIES

Christophe Bonnery
Senior Vice President, Economics & Prospectives



ÉLECTRICITÉ RÉSEAU DISTRIBUTION FRANCE

: @Ch_Bonnery

Name and Family Name

EPEE Session – Cigré Paris GS, August 25, 2014

Slide number



Question 1 – What level of specialization of engineering curricula should be sought for? Is basic, fundamentals knowledge more formative and potentially more effective for industry than up-to-date information ?

- Energy and power companies are extensively hiring engineers
- More economists should be hired in the energy field, including PhD
- Even in some entities where they could be a minority, pure engineers are too much represented.
- The energy transition process in many countries induce a lot of support in strong economics and modelling background.



Question 2 – What are the differences between Industry needs and expectations and Academia ones ?

- Main gap between two completely different notions: the theory and the practice
- What is taught in University is somehow unplugged from what is put into practice in Industry, i.e. Microeconomics or Macroeconomics are the two major examples. They both are needed in the real world. We do not apply in Industries as often as possible what has been learned in University at the industry level. And vice versa
- Most companies ask for a first experience to hire students or PhDs. Most of them don't have ... Long term internship or transition contracts could be developed



Question 3 – What are the reasons behind the gap between Academia and Industry, if any ?

- Two different worlds: theory vs reality.
- What is applied in academia could barely be applied in industry.
- Academics do not change their vision with the environment as often as industrials do.
 - A conflict between long term vision and short term vision.
- Academics search for a long term knowledge that they can rely on for a long time. Nonetheless, Industrials search for a very short term knowledge that can change frequently and adapt itself to changing situations.



Question 4 – What is the current status of cooperation between Academia and Industry and in particular the interaction between industry and undergraduate/doctoral programs ?

- Cooperation should be reinforced.
- An internship policy should be more integrated in University's program and since the second year of college. Students shouldn't wait for the final of their curricula. Those internships should be considered way sooner.
- Universities should hire more Industrial PhDs or Executives as professors so they can give a more real view of what's happening in the Industry and how they put into practice what they have learned.
- Difficulty to be addressed: transcript the industrial vision into a academic vision that could be taught.



Question 5 – Is at present the number of PhDs produced every year for the higher education establishment too much to be absorbed by Industry?

- In my point of view, there aren't enough PhDs in the energy field.



Question 6 – Should industry be involved in the management of Educational Establishments?

- Yes
- To be discussed with each university

