

Paris Session 2022



Who drives the innovation?

SC A2 Power Transformers & Reactors

PS3, Q3.2 - How are innovative ideas and/or processes incorporated in technical specifications, both for short-term and long-term perspectives? Should innovation be driven more by users' demands or by manufacturers' proposals?

Radoslaw Szewczyk, Poland
Jean-Claude Duart, Switzerland



Summary

- It seems the innovation is more often driven by the manufacturers and solution providers (materials, components).
- The dialog is necessary between material suppliers, component suppliers, designers and users for proper understanding of technical options and needs.

Innovation in transformer specifications

Possible innovation flow:

1. Solution providers research for innovation to become competitive and spend time, money and effort for that.
2. The material solutions, components and eventually design solutions must be then integrated into the transformer design and offered to the user.
3. User can then select from multiple design options (“toolbox”) on what is the best for the addressing the existing needs.

Obstacles:

- Some solutions might be attractive but there is **not enough existing reference at the industry**. - Then, step-by-step introduction of new solution is necessary (e.g. small scale prototyping).
- Sometimes, the **standards are missing** that could ensure the users that the solution is proven and well accepted at other users. BUT standard for certain solutions cannot be developed without some experience existing at the industry.

Group Discussion Meeting

Long value chain does not help in complex projects

- Individual solutions may not be valid when not combined with other innovations.
- The synergy between the innovative approaches may need to be proven by multiple value chain players.
- The manufacturer or sometimes end user may be the only one to combine them for proper evaluation of the benefits. Otherwise, no benefit will be properly seen.
- Individual players may not be able to reach through all the steps in the value chain and prove the value for the solution or solutions.

Example: Material solution for transformer that could help in optimizing the cost of offshore wind collector platform.

1. Material supplier
2. Component manufacturer
3. Transformer OEM
4. Wind farm system integrator
5. Top side platform supplier
6. Supporting structure supplier
7. Developer of the offshore wind farm

Group Discussion Meeting

