

## 843 – Is process electrification a straightforward approach?

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Abstract: Decarbonizing processes is not any more an option. Indeed, it is a challenge for the innovation and transformation capabilities of companies in heavy industries, as oil and gas. But what is the most efficient manner to achieve it?

Process electrification is reasonably pledged as one of the key solutions, and we assist to the first step, the integration of more and more electricity driven motors than combustion motors. Heaters and boilers are another large consumer of fossil energy and their cumulated power can range to 10's or hundreds of MW. But such a massive electrification would have multiple dimensions: sources of energy, hydrogen production, power system design and interconnection among others.

In this paper the authors make a round on the question using project examples from oil and gas and other industries aimed to describe in detail and from a more technical perspective the various challenges for a successful decarbonization.

Would the emergence of low carbon sources as small nuclear reactors, which can supply heat and power facilitate the transition to decarbonized processes? The authors will give their vision on this subject to invoke a larger discussion.