

## **HYDROGEN IN THE CZECH REPUBLIC AND ITS ROLE FOR THE FUTURE**

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Hydrogen and hydrogen technologies become intensively discussed topic in the Czech Republic within last 2 to 3 years. This is clearly connected with the Green Deal program of the European Commission, the program provoking numerous controversies and misunderstandings. This becomes even more evident with break out of the crisis at Ukraine. The last aspect is on one side interpreted as a killing hit for the Green Deal, on the other side as a clear indication for Green Deal being the only viable choice for the future. Why is this?

The main pros and cons used by both, opponents and advocates of the hydrogen technologies, may be marked either as rational or irrational, or as obvious and as hidden ones. Due to the limited space, the discussion here will be rather general and oversimplified. Nevertheless, let's start with the first group of rational and obvious arguments. Two clearly negative aspects represent the facts, that today economy has developed for more than 2 centuries and has reached highly optimized level with extensive infrastructure. At the same time, it is based on an enormous energy density accumulated in the fossil fuels over the millions of years. Change of this well established an known system to the another one, moreover using the technologies based on a much lower energy density components, clearly raises well-justified fear from economic consequences. On the other hand, existing dependence on the fossil fuels located in the geographic regions often characterized by instable or due to the various reasons not easily predictable political system, represents another well understandable fear for the future. Aspects that are more irrational represent general limited human willingness to change working system, despite existing its negative aspects and, of course, concern of hydrogen explosiveness.

Therefore, we are staying now in front of an important decision. Do we participate in this technology challenge, or do we risk losing the working places for our industry sector and stay a side of the ongoing process?