



ISO/TC 197
Hydrogen technologies

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Interview with the TC 197 Chair

by Dr. Andrei Tchouvelev, ISO/TC 197 Chair, and Karen Quackenbush, FCHEA

In this twelfth installment of FCHEA's "Interview with the ISO/TC 197 Chairman" series of articles, Dr. Andrei V. Tchouvelev discusses the upcoming Strategic Planning Meeting for ISO/TC 197, being held Wednesday, December 11th in Grenoble, France, which will focus on "New Frontiers".

With the recent progress of the ISO 19880 series of documents for gaseous hydrogen fuelling, I asked Dr. Tchouvelev to provide an indication of where the Technical Committee may be focusing in the future. "The key criteria in deciding which of the new frontiers to address next", Dr. Tchouvelev explained, "is their market relevance and significance for the economy". "From this perspective the following areas need immediate attention", he further opined:

- new electrolyser test requirements for active grid balancing;
- P2G / P2H / P2X: pure hydrogen and blends with natural gas;
- fuel quality specs, distribution and use in residential applications;
- green hydrogen guarantee of origin;
- hydrogen for heavy duty applications:
 - hardware and fueling protocol(s); and
- new requirements for non-industrial use for liquid hydrogen.

Power-to-Gas (P2G) is certainly a hot topic here in the USA, as well as globally. I asked Dr. Tchouvelev what role he sees for International Standards in this field. "The biggest innovative power of P2G/P2H/P2X approach", Dr. Tchouvelev noted, "is the involvement of diverse industries and parts of the economy into one energy chain with hydrogen in the center of it." He added, "These technologies have become global although a debate whether P2G makes economic sense still go on. From TC197 perspective, however, we need to step in regardless because our objective are safety (mostly) and performance standards. Regulations cannot and should not be developed without standardization base, hence the need for international standards because clearly these applications need to be regulated".

This sounds like a big job with many diverse stakeholders. I asked Dr. Tchouvelev how he envisages the effort proceeding in a coordinated way. "In my opinion", he replied, "the only way to properly standardize this space is to involve all relevant international technical committees and develop a 'roadmap' with proper hand-offs between standardization requirements. This way the whole energy and economic chain will be covered." He acknowledged that this is easier said than done, and noted "we are working with our standardization partners in Europe and Asia to bring relevant partners together for a discussion on such a 'roadmap'. From this perspective, TC197 may need to think establishing a subcommittee on hydrogen at scale and cross-cutting technologies with the idea that the main TC will continue focusing on basic pure H₂ technologies, while the new SC may focus on cross-cutting issues and overlap with other fuels and energy carriers."

The concept is still in early stages; however, Dr. Tchouvelev plans to flesh it out for a more formal discussion by the time of the 2020 plenary meeting in Korea.