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QualyGridS – Standardized qualifying tests of electrolyzers for grid services

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Abstract

The project QualyGridS establishes standardized testing protocols for electrolyzers to perform electricity grid services. A variety of different grid services are addressed as well as multiple hydrogen end users. The protocols developed are applied to both alkaline and PEM electrolyzer systems, respectively, using electrolyzer sizes from 50 kW to 300 kW. Additionally, a techno-economic analysis of business cases is performed covering the grid and market situations in the most relevant regions of Europe for large electrolyzers (>3MW). Testing protocols and economic analysis also include the review of existing and possibly set-up of new Key Performance Indicators (KPI) for electrolyzers.

In this poster an overview of first drafts of testing protocols for electrolyzers to perform relevant grid services is presented. The protocols are trying to integrate the requirements of the respective service in every European country. First dynamical tests of an electrolyzer system to follow these testing protocols are presented.

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