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Preface

This Guideline was developed by the project group “H₂ Readiness for Gas Installation” within the Technical Committee “Gas Installation” with the involvement of representatives from Technical Committees “Domestic, Commercial, and Industrial Gas Applications”, “Components and Auxiliary Materials – Gas”, as well as of “Infrastructure Gas Mobility”.

According to the German Energy Industry Act (“*Energiewirtschaftsgesetz*”; EnWG) Article 3 No 10c und No 19a the injection of hydrogen and other renewable gases is permissible. In combination with Article 49 of the Energy Industry Act, the DVGW Sets of Rules and, specifically, the technical rules Code of Practice G 260 “Gas Quality”, for domestic installations still G 600 “Technical Rule for Gas Installations” (DVGW TRGI) and G 614-1 “Above-Ground Gas Pipelines on Premises behind Point of Delivery — Design, Construction, Testing and Commissioning” shall be taken into account..

According to DVGW Code of Practice G 262:2011-09 “Usage of Gases from Regenerative Sources in the Supply of the General Public with Gas”, the injection of < 10 vol% hydrogen has been admissible. The revision of DVGW G 260:2020-09 (draft) and entailed fusion with DVGW G 262 (A) has laid the basis for the injection of hydrogen of up to 20 vol%. In principle, the injection with such a volume was already possible through applying a corresponding exception in DVGW G 260 (A):2013 Section 4.2.2 “Relative Density” and carrying out pre-acceptance testing in case values fell below the relative density.

To make “pure” hydrogen networks possible, an amendment of the Energy Industry Act is currently being developed which will integrate pure hydrogen networks into the Act. There, the DVGW Sets of Rules are referenced as the generally accepted state-of-art.

This Guideline further expands the DVGW sets of rules for hydrogen-rich natural gas of up to 20 vol% H₂ or hydrogen in the context of a two-step process.

In the first step, “H₂ Guidelines” are developed for the fields “gas infrastructure” and “gas utilisation” which describe the protection objectives for hydrogen-rich natural gases and hydrogen that must be adhered to and that supplement the existing sets of rules. The goal is to expand the scope of application of DVGW Sets of Rules to natural gas/hydrogen mixtures or pure hydrogen. The process includes advice and recommended actions that make e.g., the realization of pilot projects or conducting individual certified acceptance tests possible.

In the second step, the respective national and European rulesets are revised and adjusted in detail with consideration towards the results of parallelly occurring F&E activities.

In some sections, only generalized specifications or notes are currently possible. As soon as new state of knowledge exists, these generalized items will be specified with more precision.

This Guideline is a first publication.