

# Natural Gas Quality Management Manual

*Prepared by*  
**Transmission Measurement Committee**

**August 2013**



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## FOREWORD

Pipeline natural gas is not just methane, but rather a complex mixture of hydrocarbon and inert gases, sulfur compounds, moisture, and other trace constituents and contaminants. These numerous constituents form the basis of physical and chemical relationships that further define natural gas as a product. To this end, it is important to understand what is implied by the word “quality.” In the traditional sense, “quality” implies excellence or superiority. However, when speaking in the context of “natural gas quality,” the word “quality” simply means any of the features that describe the chemical or physical characteristics of natural gas.

The subject of natural gas quality has received a great deal of attention by all industry sectors, from the wellhead to burner tip. Although many technical and policy references are available, examination of these resources revealed an information gap in the area of the practical gas system operating concerns and management planning. This manual is intended to bridge that gap. This single-source, easy-to-use reference tool provides an overview of the technical considerations for gas quality management planning. It combines concepts from several resources to help piece together the gas quality puzzle and enhances the understanding of the comprehensive set of dependent and independent variables that define the term “gas quality.”

It is generally recognized that a “one-size-fits-all” solution to gas quality management and planning is impractical if we are to balance the concerns of maximizing supply while minimizing impacts on gas transportation and end use. This manual highlights the technical considerations to establish reasonable and practical gas quality management guidelines to ensure this balance is realized, while continuing the natural gas industry’s rich history of providing a safe, reliable, environmentally responsible, and cost-effective product to our customers.

Much of the information contained in this manual is found in a variety of existing technical resources. A list of these resources, although not complete, is included in this document. This manual is a compilation of publicly available technical literature, Internet information, and opinions of researchers and other experts in the industry. The industry as a whole is still learning about gas quality and its effects on pipeline infrastructure and end use. It is in the industry’s best interests to continue research and dissemination of available history and experience. Even though attempts were made to gather information from reliable sources and correctly interpret it, this information should be used only for educational purposes. More in-depth analysis may be required to address specific situations within your company.

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