

## NORTH AMERICAN ENERGY STANDARDS BOARD

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NAESB REACHES SIGNIFICANT MILESTONE IN EFFORT TO SUPPORT THE IMPLEMENTATION OF DISTRIBUTED LEDGER
TECHNOLOGIES FOR THE WHOLESALE NATURAL GAS MARKET

After nearly two years of focused development, NAESB is pleased to announce that its subcommittees have reached consensus on an initial set of standards that will define the requirements of a digitalized version the *NAESB Base Contract for Sale and Purchase of Natural Gas* (Base Contract) and will enable the natural gas industry to conduct trades under the contract utilizing distributed ledger technologies. The standards development effort, which started in October 2018, was undertaken by the industry with the goal of adding efficiency to the existing accounting and reconciliation of natural gas trades by replacing manual processes with automated executions through the use of distributed ledger technology. The new standards, which are still being vetted through the NAESB process and are expected to be adopted by the full organization later this summer, were developed by nearly 150 volunteers from 88 NAESB member companies representing all segments of the supply chain.

In a parallel effort, Tennessee Valley Authority (TVA) and ExxonMobil have been working together to initiate a pilot test to implement the newly developed standards by replicating their natural gas trades utilizing ledger technology in a test environment. It is expected that the pilot test will provide valuable information related to the efficiencies that may be gained through the use of the NAESB standards and will identify other critical components, such as cybersecurity requirements and a governance structure, needed to support a uniform implementation of the technology by the industry. With the proper standards and an architecture in place, trading partners, transportation service providers and developers will be able to integrate the use of distributed ledgers into their current business processes with a higher level of confidence that the benefits of the technology will be realized, potentially speeding adoption.

The details of the test between TVA and ExxonMobil have been closely coordinated with Department of Energy (DoE), and other governmental agencies, to ensure the data produced through the test will be informative and align with the goals of other projects underway by the DoE. As highlighted in remarks made by Shawn Bennett, Deputy Assistant Secretary for Oil and Natural Gas of the DoE, during the September 2019 NAESB Board of Directors meeting, "Today, natural gas trade and settlement accounting processes are cumbersome and involve many manual steps between producers, pipelines and end users. Tennessee Valley Authority has reported that gas supply invoice reconciliation takes on average 21 days. If NAESB can develop the standard for smart digital gas contracting using block chain or distributed ledger technology, it would be at the forefront of the new way of doing business that is efficient and possibly better protected from cyberattacks, modernizing the existing natural gas supply chain."

As one of the parties that submitted the original standards request to NAESB, TVA has been extremely active in the development of the standards. Valerie Crockett, a Senior Program Manager with TVA and Vice Chair of the NAESB Wholesale Gas Quadrant (WGQ), stated, "TVA's generation as the test subject and a sister federal agency of the DoE, offers a number of benefits beyond being the largest public power authority in the U.S. TVA's large geographic area covers numerous interstate gas pipelines and has access to multiple supply regions, which when combined with the generation facilities, provides a broad based test bed for evaluating the impacts of distributed ledger technology and its associated services and tools -- not only for the test partners, but as applied to the marketplace itself. We are excited to be part of this ground-breaking effort using NAESB standards and services." Similarly, Randy Parker, Senior Policy Advisor, ExxonMobil, and Vice Chair of the NAESB WGQ Executive Committee, said, "It's been great to be part of this process. We've been discussing the benefits of having access to a digitized version of the NAESB Base Contract for quite some time now. The pilot test is the next step in proving the efficiencies we've been touting on this new technology."



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With the support of Big Data Energy Services, Ardua Strategies and The Energy Authority, NAESB plans to continue its involvement in the pilot test by establishing a model for the use of the digital version of the Base Contract. The Base Contract was NAESB's seminal standard, adopted in 1996, and has become the de facto instrument used by the industry for short-term and long-term natural gas supply arrangements. As advances in technology are now enabling these transactions to take place digitally, NAESB has committed to supporting this transition by developing standards that will support the use of the Base Contract in a digital format. These steps have been taken to ensure that the transactional cost savings, ultimately passed down to consumers, and the benefits of establishing the base terms and conditions under which natural gas is traded are established in an open process by participants representing all segments of the supply chain continue into the future with the adoption of new technologies.

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The North American Energy Standards Board (NAESB) serves as an industry forum for the development and promotion of standards which will lead to a seamless marketplace for wholesale and retail natural gas and electricity, as recognized by its customers, business community, participants, and regulatory entities. It is composed of three hundred corporate members in the energy industry and many more non-member volunteers who contribute to the drafting and adopting of NAESB standards. To learn more about NAESB, go to www.naesb.org.