##### August 17, 2018

**TO:** All Interested Parties

**FROM:** Elizabeth Mallett, NAESB Deputy Director

**RE: Update to the Board of Directors – Blockchain Request**

During the February Advisory Council meeting, blockchain was one of the main topics identified to be included in the strategic direction of NAESB for 2018 and beyond. The Advisory Council suggested that NAESB consider standards development to support the integration of blockchain technology into energy transactions, including how blockchain can improve resilience and supply chain integrity. Further, the Advisory Council recommended that NAESB monitor customer-to-customer transactions and how blockchain technology supports those transactions.

At the beginning of July, Standards Request R18007 was submitted to the NAESB Office by Big Data Energy Services, Adjoint Inc., Pariveda, American Electric Power Service, Tennessee Valley Authority, and JKM Energy & Environmental Consulting. The requestors asked that NAESB develop a standard digital representation of natural gas trade events, consistent with NAESB WGQ Standard No. 6.3.1 – NAESB Base Contract for Sale and Purchase of Natural Gas, in order to capitalize on smart contract and distributed ledger technologies.

As explained in R18007, a blockchain is a distributed ledger used for recording transactions and tracking assets in blocks. The distributed ledger is maintained by a group of peers, or several computers, instead of a centralized authority. Through the peer-to-peer network, each transaction, or block, is verified by consensus on the performance of a computer algorithm before it is added to the blockchain. Having numerous copies of the historical record on the ledger across the group of peers increases the veracity of the ledger, as false and/or fraudulent blocks are identified and removed by a failure to reach consensus on the algorithm that is calculated by the peer group. The transparency of the blockchain is demonstrated by the record of activity that is available to those who have been permitted access to the blockchain platform. Smart contracts are protocols embedded into blockchain platforms to facilitate the automatic self-execution of a transaction if agreed upon terms are met.

R18007 is currently in the NAESB triage process, expected to conclude on August 17, 2018, and has a recommended disposition that the request be found in scope, assigned to the WGQ and, assigned to the WGQ Executive Committee for further assignment.