##### February 26, 2019

**TO:** All Interested Parties

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

**RE: Blockchain Standards Development Efforts Update**

Last February, the NAESB Advisory Council recommended that NAESB consider the development of standards to support the integration of blockchain technology into energy transactions, including how blockchain can improve resilience and supply chain integrity and how blockchain technology may support customer-to-customer transactions. At the beginning of July, a standards request was submitted to the NAESB Office from 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.

In response to the standards request, the Triage Subcommittee and WGQ Executive Committee jointly assigned the request to the WGQ Business Practice Subcommittee (BPS), the Electronic Delivery Mechanisms Subcommittee (EDM), and the Contracts Subcommittee to be addressed in the regular course of business. Additionally, the WGQ Executive Committee requested that the first joint meeting of the subcommittees be held in-person and include an educational component to provide those not familiar with blockchain technology an opportunity to learn how it may be applied to the commercial practices of the natural gas market. Consistent with the direction provided by the WGQ Executive Committee, the joint WGQ BPS, EDM, and Contracts Subcommittee held a face-to-face meeting in October. During the meeting, a primer on the application of blockchain technology was provided by a participant from the Oil and Gas Blockchain Forum, and the entities that submitted the standards request provided a presentation and overview of the request. Since that first meeting, the joint subcommittees have met three times and developed a scope of work document which identifies several steps to address the request. The subcommittee recognized that, outside of the NAESB standards development process, a Blockchain Proof of Concept effort has been put together and hosted by industry volunteers. During the upcoming April 3, 2019 joint WGQ BPS, EDM, and Contracts Subcommittee conference call, the participants will continue to identify necessary data elements from the NAESB Base Contract, WGQ invoices, and related datasets that may be utilized within a smart contract.

In the Wholesale Electric Quadrant (WEQ) and Retail Markets Quadrant (RMQ) space, two new blockchain items were added to the 2019 annual plans and approved by the Board of Directors in December. First, a joint item to be addressed by the WEQ and RMQ asks for the consideration of blockchain standards in support of the manual Renewable Energy Certificate accounting processes. The second blockchain annual plan item was assigned to the WEQ and proposes to review and potentially develop blockchain standards to support the streamlining of the power accounting close cycle. Both items are divided into a two-step process with a review to determine whether standards development is necessary and, if so, the development of the standards or model business practices. These annual plan items will be further discussed during upcoming Executive Committee meetings.